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Substance Use Among Women in the United States

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SUBSTANCE USE AMONG WOMEN IN THE UNITED STATES

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration

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Highlights

This report represents the first systematic effort to study alcohol, cigarette, and illicit drug use in a sample of women aged 12 and older representing the civilian, noninstitutionalized population of the United States. Using data from the 1979-1995 National Household Surveys on Drug Abuse (NHSDA), the report shows trends in the prevalence and patterns of substance use and abuse among women. Based on data from the 1991-1993 and the 1994-1995 NHSDAs, it describes current traits of female substance users and abusers, and examines correlates (i.e., demographic characteristics; drug use histories; and psychosocial and behavioral characteristics) of substance use and abuse in women. Furthermore, the report explores substance use among women during pregnancy; use of drug treatment services among female drug abusers, characteristics of women who did not receive needed drug treatment; and involvement in criminal activities by female substance users.

The key findings of this report include the following:

Chapter 2. Trends in Prevalence and Patterns of Substance Use

- Although gender differences in substance use have narrowed slightly in recent years, a smaller percentage of adult females than adult males in each age category reported use of alcohol, cigarettes, marijuana, cocaine, and *any* illicit drug in each year from 1985 to 1995.

- The decreasing trend in youth illicit drug use from 1979 to 1992, and the subsequent increase from 1992 to 1995, occurred for both males and females.

- During the period between 1961-65 and 1986-90, females generally initiated alcohol use at later ages than males. But during 1991-1995, the gender difference in age-specific rates of alcohol initiation became negligible. The percentage of female alcohol initiates who were between 10 and 14 years of age increased from about 7% during 1961-65 to about 31% during 1991-95.

Highlights

- Between the early 1960s and the early 1970s, female and male rates of marijuana initiation converged until, beginning in the early 1970s, the female rate of marijuana initiation equaled about three-fourths the male rate in each observed age group. Since the early 1970s, rates of marijuana initiation have consistently declined among females and males in every age group except the 10- to 14-year-olds.

Chapter 3. Patterns of Substance Use among Women

- After statistically adjusting for demographic and other factors, adult men were found to be more likely than adult women to have used alcohol heavily in the past month and to have used any illicit drug in the past year. However, adult women were almost as likely as adult men to have used psychotherapeutics in the past year.

- Among 12- to 17-year-olds, a significantly higher percentage of females than males reported the use of psychotherapeutics in the past year, whereas the percentages reporting past-year alcohol, cigarette, marijuana, or other illicit drug use were about the same among females as it was for males.

- Adult women who were divorced/separated or never married reported a significantly higher prevalence of *any* illicit drug use and problem drug use than adult women who were married.

Chapter 4. Correlates of Substance Use and Abuse

- For both adult men and women, higher rates of illicit drug use were found among younger adults (ages 18-25 and 26-34), those in families with a member of the household receiving welfare assistance, those who were unmarried, those who had first experimented with alcohol or drugs at age 15 or younger, and those with one or more of the four specified mental disorders. (The disorders were major depressive episode, generalized anxiety disorder, agoraphobia, and panic attacks.)

- For adolescent girls (aged 12-17) as well as boys, the following characteristics were important correlates of alcohol, cigarette, or illicit drug use in the past year: being aged 15-17, living with persons other than one's own two biological parents, family relocation in the past five years, being from a family in which a member of the household was receiving welfare assistance, and having emotional and behavioral problems. However, dropping out of school was correlated with substance use for adolescent boys, but not for adolescent girls.

Highlights

Chapter 5. Pregnancy and Substance Use

- An estimated 62,000 pregnant women aged 12-44 reported using any illicit drug in the past month. This translates to an estimated 2.3% of all pregnant women aged 12-44. About 584,000 (21.2%) pregnant women reported past-month alcohol use, and approximately 591,000 (21.5%) reported using cigarettes in the month preceding the interview.

- Substance-using women who were pregnant at the time of the interview reported a significantly lower prevalence of past-month use of alcohol, marijuana, and *any* illicit drugs than non-pregnant women. This suggests that women may have reduced or stopped use of substances during pregnancy, but increased use after they gave birth.

Chapter 6. Parental Drug Abuse and Children at Risk

- An estimated 1.7% of women aged 18 and older who lived with children under age 18 were problem drug users. This translates to an estimated 649,000 mothers who were in need of drug abuse treatment.

- The sociodemographic characteristics and mental health status of female problem drug users living with children were as follows:

  - 72% were white and 53% were not married;
  - 69% had a high school education or less, 57% were not employed, and 41% lived in households in which a member had received welfare assistance; and
  - 35% had had a past-year major depressive episode and 45% had had at least one of the four mental syndromes measured in the survey (i.e., major depressive episodes, generalized anxiety disorder, agoraphobia, and panic attacks).

- Female problem drug users who lived with children under age 18 differed significantly from male problem drug users in terms of employment and marital status: male problem drug users who lived with children were about twice as likely as female problem drug users to be married and employed full-time.

Highlights

Chapter 7. Women's Use of Drug Treatment Services

- Females aged 12 and older reported past-year drug treatment at a significantly lower rate than males aged 12 and older, even among those needing treatment. About 30% of females compared to 35% of males who needed drug treatment received it in the past year.

- Adult women who did not receive needed drug treatment differed from adult men who did not receive needed treatment in the following ways: females were more likely to be white, married, high-school graduates, and to live with one or more children under age 18. They were less likely to be employed, and to be dependent on alcohol.

Chapter 8. Criminality and Substance Use

- Adolescents and adults who used substances in the past year reported significantly higher rates of criminal arrests, parole or probation, and criminal activities than their counterparts who did not use substances in the past year. The association between criminal arrests and illicit drug use was stronger for adult women than for adult men, and the association between substance use and criminal activities was stronger for adolescent girls than for adolescent boys.

- Compared to male substance users, adult female substance users generally reported significantly lower rates of criminal arrests, parole or probation, and criminal activities. But no gender difference in criminal activities was found for adult heavy alcohol users.

- Compared to adolescent male drug users, adolescent female drug users reported significantly lower rates of criminal arrests, probation or parole, and criminal activities.

1. INTRODUCTION

Although substance use and abuse are reported more often by men, and research to date has focused mainly on the behaviors and needs of male substance users and abusers, substance use is a significant problem for women. Research has demonstrated that abuse, or problem use, of alcohol or illicit drugs by women is a risk factor for unprotected intercourse, sexually transmitted diseases and HIV infection, unintended pregnancy, poor birth outcomes, child abuse and neglect, criminal activities, mental health disorders, and other adverse health and social consequences (Bureau of Justice Statistics, 1992; Jones and Lopez, 1990; Warner, 1995; West and Prinz, 1987; Wenzel et al.,1996). Substance use and abuse among women of child-bearing age are especially problematic, because they not only pose hazards to their long-term health, but also endanger the well-being of their children. Therefore, research on substance use among women has increasing significance for the nation as a whole.

THIS REPORT AIMS TO:

- present the most current information available on the **prevalence and patterns of substance use and abuse** among women in the general U.S. population,
- describe patterns and correlates of substance use and abuse that are **unique to women**,
- document how substance use **affects women and men differently**,
- examine female drug users' **experiences with drug treatment services and the criminal justice system** that may differ from those of male drug users, and
- **identify subgroups of women** who are adversely affected by substance abuse so that they may be targeted for early prevention and intervention.

THE DATA:

This report uses data from the 1979-1995 National Household Survey on Drug Abuse (NHSDA), a cross-sectional survey of the civilian noninstitutionalized population of the United States aged 12 and older.

The National Commission on Marihuana and Drug Abuse sponsored the first two NHSDA surveys, conducted in 1971 and 1972. The National Institute on Drug Abuse directed the NHSDA in 1974, 1976, 1977, 1979, 1982, 1985, 1988, 1990, and 1991. Since October 1992, the survey has been conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services.

THE METHOD:

The NHSDA collects information by administering questionnaires to a representative sample of the population at their places of residence.

The two primary goals of this survey are:

1. to estimate the prevalence of illicit drug use in the United States, and
2. to monitor trends in prevalence.

Except for trend analyses in chapter 2, this report analyzes data from respondents either in the three survey years 1991, 1992, and 1993, or in the two survey years 1994 and 1995. (See the detailed discussion of the data in Appendix A.) Because of the relatively rare nature in the general population of events such as pregnancy, drug dependence or problem drug use, drug treatment, and criminal arrests, we use the combined data from multiple annual surveys, weighted to reflect the estimated general population at the midpoint of these multiple years.

FEATURES OF THIS REPORT

REFERENCES TO TABLES AND FIGURES:

Each chapter contains a reference list (with page numbers) to the tables and figures appearing within that chapter. Figures are embedded in the text while all tables appear at the end of the chapter.

MEASURES:

Each chapter also contains a section called "Measures" that explains the NHSDA data that are used in that chapter.

The "Measures" section also provides definitions of all terms used within that chapter.

THE ORGANIZATION

This report is organized into eight chapters to help readers readily find the information they need. The chapter breakdown is as follows:

Trends in Prevalence and Patterns of Substance Use

Chapter 2 uses the 1979-1995 NHSDA data to examine differential trends between women and men in the prevalence of illicit drug and heavy alcohol use, and perceived risks from illicit drug, heavy alcohol, and heavy cigarette use. These data are further broken down by gender, in demographic subgroups defined by age. Finally, the chapter studies long-term trends in patterns of alcohol and marijuana initiation for women and men.

Patterns of Substance Use Among Women

Chapter 3 documents the most current patterns of lifetime and past-year alcohol, cigarette, and illicit drug use among women, and describes the epidemiology of women's heavy use of alcohol and cigarettes, and problem drug use. Additionally, this chapter examines variations in patterns of substance use among subgroups of women defined by race/ethnicity and marital status.

Correlates of Substance Use and Abuse

Chapter 4 uses the most current (1994 and 1995) NHSDA data to identify the demographic, psychosocial, and behavioral characteristics that may be associated with prevalence of alcohol, cigarette, and illicit drug use among female adults and adolescents. It also examines characteristics associated with heavy use of alcohol and cigarettes, and with problem use of any illicit drug. Further, this chapter examines—separately for adult women and adolescent girls—the differences in correlates for different measures of substance use.

Pregnancy and Substance Use

Chapter 5 summarizes the prevalence and patterns of alcohol, cigarette, and illicit drug use among women of childbearing age during pregnancy. The chapter also provides demographic profiles of women who use substances during pregnancy. Finally, the chapter discusses the kind of access pregnant substance users have to health care.

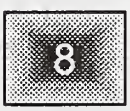
Parental Drug Abuse and Children at Risk

Chapter 6 assesses the prevalence of drug abuse among women who did and did not live with children. Further, this chapter compares rates of drug abuse between women and men who lived with children under age 18. Finally, It compares the demographic characteristics, mental syndromes, and drug treatment experiences of female and male drug abusers who lived with children under age 18.

Women's Use of Drug Treatment Services

Chapter 7 assesses the prevalence of drug treatment among female and male drug abusers. This chapter also examines financial resources and their relationship to prevalence of treatment service use among female and male drug abusers. The chapter concludes by providing a demographic profile of women who needed drug treatment but did not receive it.

Criminality and Substance Use



Chapter 8 compares female and male substance users' experiences with the criminal justice system and their reports of criminal activities. This chapter then examines whether the relationship between criminality and substance use for women varies with types of substance used, levels of drug involvement, and categories of criminal offenses.

2. TRENDS IN PREVALENCE AND PATTERNS OF SUBSTANCE USE

This chapter uses the 1979-1995 NHSDA data to study long-term trends for women and men in substance use and abuse, perceived risks from substance use, and patterns of substance use initiation. In addition, this chapter focuses on the prevalence of alcohol, cigarette, and illicit drug use, and perceived risks from substance use among females relative to males in the 12-17 age group. This focus is important, since previous research has indicated that trends in the prevalence of substance use and abuse among the 12-17 age group may be different from those among the older age groups.

INTRODUCTION: Researchers have speculated that the rates of alcohol, cigarette, and illicit drug use for women and men have converged over the past decade as more women, in particular girls aged 12-17, have started using alcohol, cigarettes, and illicit drugs (Center on Addiction and Substance Abuse, 1996; Fiore et al., 1989; Substance Abuse and Mental Health Services Administration, 1997a; Wilsnack et al., 1991). However, empirical evidence has been extremely scarce about differential trends between women and men in prevalence and patterns of substance use, and of perceived risks from using substances.

REFERENCE TO TABLES AND FIGURES

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2-1 Percentage Reporting Past-Month Substance Use Among Adolescents Aged 12-17, by Gender: 1979-1995. Page 2-7

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RESEARCH QUESTIONS:

- ❒ **Over time, did the rates of substance use and abuse between women and men converge?**
  (Pages 2-6, 2-7)

- ❒ **Over time, did women's perceived risks of substance use become more similar to men's?**
  (Pages 2-8, 2-9)

- ❒ **Over time, did patterns of substance use initiation among women become more similar to those among men?**
  (Pages 2-10 through 2-13)

MEASURES

This chapter uses NHSDA data on LIFETIME, PAST-YEAR, and PAST-MONTH use of alcohol, cigarettes, marijuana, cocaine, and *any* illicit drug from 1979 to 1995[1] to measure trends over time in the prevalence of LIFETIME, PAST-YEAR, and PAST-MONTH substance use among women and men. In addition, we examine DIFFERENTIAL GENDER TRENDS in PAST-MONTH binge and *heavy* alcohol use, from 1979 to 1995. (**Binge alcohol use** is defined as drinking five or more drinks on the same occasion at least once in the past 30 days, and **heavy alcohol use** is defined as consuming five or more drinks per occasion on 5 or more days in the previous 30 days.) The summary variable of ***any* illicit drug use** includes marijuana, cocaine (including crack), inhalants, hallucinogens, heroin, and nonmedical use of psychotherapeutics.

DIFFERENTIAL CHANGES IN PERCEIVED RISK OVER TIME BETWEEN MALES AND FEMALES

In order to investigate the DIFFERENTIAL CHANGES IN PERCEIVED RISK from substance use over time BETWEEN MALES AND FEMALES, we examined the data from 1985 to 1994 on respondents' perceived risk of harm from smoking one or more packs of cigarettes per day, from smoking marijuana occasionally, and from consuming four or five drinks nearly every day. Questions on perceived risk were not included in the 1995 NHSDA.

ANALYSIS OF TRENDS IN THE INITIATION OF ALCOHOL AND MARIJUANA USE

Finally, we used the data from the 1994 and 1995 NHSDA to provide an analysis of trends **in the incidence (initiation) of alcohol and marijuana** use between 1946 and 1995,[2] and of changes in females' and males' life-cycle patterns of alcohol and marijuana incidence during the same period. The incidence variables were derived from respondents' retrospective reports of their ages at first use of alcohol and marijuana. Specifically, we calculated the calendar year during which the respondent

Continued

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[1] For trend analysis of substance use and abuse, adjustments were made to previously published 1979-93 NHSDA estimates to make them comparable to estimates produced from the 1994 and 1995 NHSDAs, which were based on a new questionnaire implemented in 1994. For trend analysis of perceived risk, no adjustments were made, and 1994 estimates were based on data obtained from a subsample of respondents to the 1994 NHSDA who were interviewed using the same questionnaire that was used in 1993 and previous years. (See Appendix A for a detailed discussion of the 1994 split sample design.)

[2] Age-specific rates of first use of alcohol and marijuana for the period 1991-1995 are projections based on the 1991-1994 estimates. The 1995 NHSDA data are not used to estimate incidence in 1995, and the 1994 data are not used to estimate incidence in 1994. To project incidence rates for 1991-1995, we simply multiplied both the numerators and denominators of the rates by a factor of 5/4 = 1.25.

MEASURES (CONTINUED):

first began using alcohol and marijuana. To do this we used the age of the respondent at the first time he or she used the substance, the respondent's age at the time of the interview, and the date of the interview. We computed three summary measures of the incidence of first substance use[3]:

1) **THE AGE-SPECIFIC INCIDENCE RATE**, interpreted as the risk of first using a drug at a specified age,[4]
2) **THE ANNUAL NUMBER OF SUBSTANCE USE INITIATES**; and
3) **THE AGE-STANDARDIZED ANNUAL NUMBER OF SUBSTANCE USE INITIATES.**

(See Appendix C for a detailed description of the summary variables of the incidence of first alcohol and marijuana use.)

THE AGE-SPECIFIC RATE OF FIRST USE OF ANY ALCOHOL OR MARIJUANA measure the risk of first using any alcohol or marijuana at a specified age "per 1000 person-years of exposure[5]. To illustrate, suppose we selected a random sample of 100 persons aged 10-14 who had never used alcohol before January 1, 2000, and determined by follow-up in the year 2000 that 20 of these 100 persons used alcohol for the first time during calendar year 2000. Then the rate of first use at ages 10-14 in 2000 would equal approximately 20/100. For presentation purposes, we have multiplied the rate so that it actually reflects the rate per 1000 person-years of exposure, which in this example would be "200 per thousand person-years of exposure." The exact rate is actually a little higher, closer to 205 than 200, since most of the 20 new users started using before the end of 2000 and thus had less than a full year of "exposure to risk of first use."

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[3] Each of the three measures is conventional in epidemiology and demography. Two recent references that discuss these standard measures are Hennekins and Buring (1987, Chapter 4) and Selvin (1996, Chapter 1).

[4] Each incidence rate is computed by dividing an estimated number of substance use initiates by a corresponding "exposure to risk" measured in units of person-years. The rate of first use and the probability of first use are almost but not quite the same. The difference is that the rate is a more sensitive measure that takes into account the fact that persons will begin using at different points on the calendar in a given year, and therefore those who begin using in, say, January, will have less total exposure to risk of first use than those who do not begin using until November of that year. While the rate of first use takes into account differences among individuals in exposure to risk, the probability of first use simply assumes that all new users during the year 2000 began using on about December 31, 2000, thus experiencing one full year of exposure prior to beginning substance use.

[5] This is the total time that each person remains under observation and free from first use of alcohol or marijuana. The length of the time during which the initiation of alcohol or marijuana use could be observed is not uniform for all surveyed individuals.

❒ Over time, did the rates of substance use and abuse between women and men converge?

Population Aged 12 and Older

The percentages of females aged 12 and older reporting past-year and past-month use of alcohol, cigarettes, marijuana, cocaine, and *any* illicit drug were significantly lower than were those for their male counterparts. This pattern held for all years from 1979 to 1995 for alcohol, marijuana, cocaine, and *any* illicit drug use. It also held for all years from 1985 to 1995 for cigarette use and for "binge" and *heavy* alcohol use (data from 1979-82 were not available for these measures—see Tables 2.2 and 2.3.)

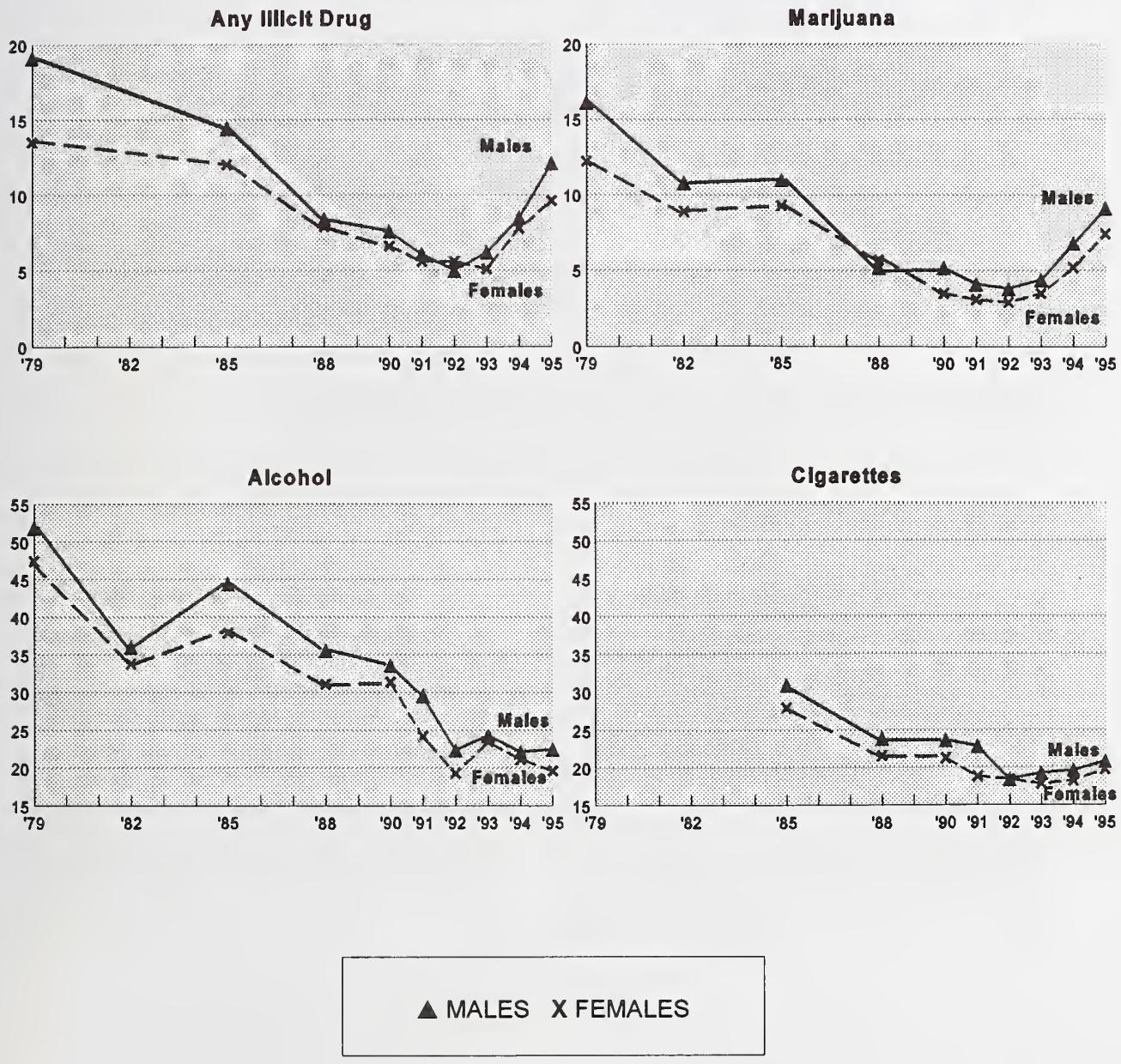
During this period, significant decreases in rates of use occurred for both men and women, but the decreases for some measures were somewhat more pronounced for men than for women. Although some trends therefore show a slight narrowing of the gender gap in the prevalence of substance use, the differences in the prevalence of these behaviors between men and women remained statistically significant.

Adolescents Aged 12-17

Differences in substance use prevalence between male and female youths aged 12-17 are generally small, with estimates for males slightly higher than for females, but not statistically higher. This is in contrast to patterns for the total population aged 12 and older.

This pattern has held since at least 1985 for alcohol, cigarette, marijuana, cocaine, and *any* illicit drug use, with one exception: rates of "binge" and *heavy* alcohol use have remained *significantly higher* for males than for females (see Table 2.4). The decreasing trend in *any* illicit drug use among youth aged 12-17 from 1979 to 1992, and subsequent increase from 1992 to 1995, occurred consistently for both males and females. (See Figure 2-1 on the following page and Table 2.4.)

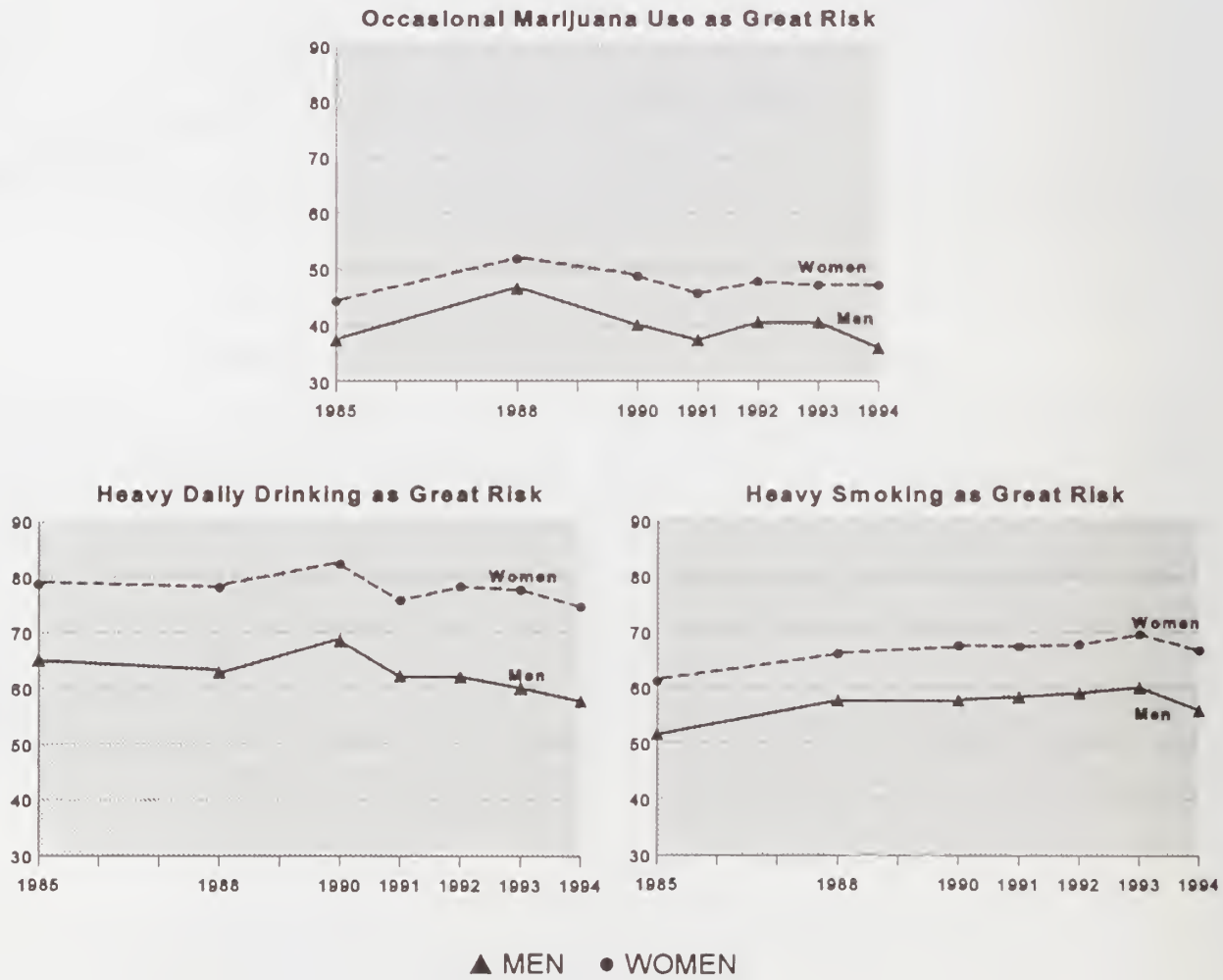
Figure 2–1
Percentage Reporting Past-Month Substance Use Among Adolescents Aged 12-17, by Gender: 1979-1995



❒ Over time, did women's perceived risks of substance use become more similar to men's?

In each year from 1985 to 1994, females were more likely than males to report that *heavy* daily drinking, *heavy* smoking, and occasional marijuana use are associated with great risk of harm (see Tables 2.5, 2.6, and 2.7, and Figure 2–2 below).

Figure 2–2
Perceived Risks of Substance Use, by Gender: 1985-1994



- Adolescents Aged 12-17: The gender difference in perceived risk from occasional marijuana use was not significant for the 12- to 17-year-olds except in 1985; and for the 18-25 age group, it was significant only in 1994.

- Older Age Groups: The gender difference in perceived risk from substance use was substantially greater in older age groups than in younger age groups.

As with males, among females the perceived risk from *heavy* daily drinking increased slightly from 1985 through 1993 and then declined substantially from 1993 to 1994. The trend in perceived risk from *heavy* daily drinking, however, differed between females and males: among females it fluctuated a great deal between 1985 and 1994, while among men it gradually decreased from 1990 to 1994. For women the long-term trend in perceived risk from occasional marijuana use is similar to the trend among men, with considerable fluctuation between 1985 and 1994, and an overall decrease from a peak of 52% in 1988 to 47% in 1994 (comparable to a decrease from 47% to 36% for men). The rate of decline in perceived risk from occasional marijuana use was smaller for females than for males (9% versus 23%).

Additionally, the patterns of risk perception among females were similar to those among men, with *heavy* daily drinking perceived as the greatest risk, followed by *heavy* smoking and occasional marijuana use (see Figure 2–2). Approximately 75-82% of females in each of the surveyed years reported that *heavy* daily drinking is a great risk, compared to 61-70% who perceived *heavy* smoking as a great risk, and 44-52% who perceived occasional marijuana use as a great risk. The corresponding percentages for males were 58-69%, 52-60%, and 36-47%.

❒ Over time, did patterns of substance initiation among women become more similar to those among men?

Incidence of Alcohol Use

The average annual number of females who initiated alcohol use increased from about 1.3 million during 1961-65 to a peak of about 2.1 million during 1971-80 (see Table 2.8). The annual number of female alcohol initiates then declined to about 1.7 million during 1986-90 before increasing to about 1.9 million during 1991-95. In contrast, the average annual number of males who initiated alcohol use peaked during 1971-75 at 2.1 million, and then declined before increasing again during 1991-95.

Rates of Alcohol Initiation: Rates of alcohol initiation have been similar between males and females since the early 1960s. That is, during each of the five-year periods between 1961-65 and 1991-95, total alcohol initiates were divided roughly evenly between females and males. For example, during 1961-65, about 53% of alcohol initiates were female, while during 1991-95, about 52% of alcohol initiates were female (see Table 2.9). In each of the five-year periods, the percentage of alcohol initiates who were female roughly equaled the percentage of the total U.S. population who were female (U.S. Bureau of the Census, 1992).

Further, a consistent increase was observed in the rate of alcohol initiation among females aged 10-14 during the past four decades. Between the late 1950s and the early 1990s, the rate of initiation at ages 10-14 increased almost 9.5 times, from about 8 during 1956-60 to 72 during 1991-95 (see Table 2.8). As a result, the percentage of total female alcohol initiates who were between 10 and 14 years old increased dramatically between 1961-65 and 1991-95, as follows.

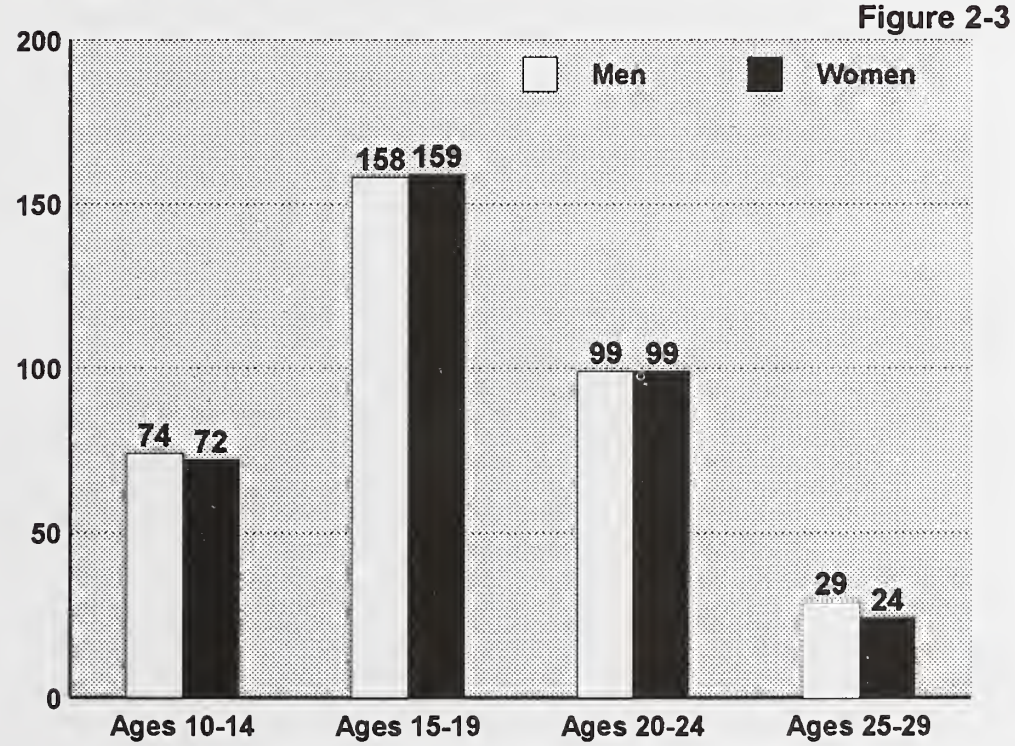
- **Female Alcohol Initiates Aged 10-14:** During 1961-65, only about 7% of total female alcohol initiates were aged 10-14, while during 1991-95, about 31% of total alcohol initiates were aged 10-14. The increase in female alcohol initiates would have been even greater if not for the aging of the population since the early 1970s.

- **Increased Rate of Female Alcohol Initiation:** The increase in the rate of alcohol initiation for females at ages 10-14 was consistent from 1961-65 through the early and mid-1980s, but the rate of increase greatly accelerated between the late 1980s and early 1990s, increasing by nearly 58% between 1986-90 and 1991-95. The pattern of increase in the rate of alcohol initiates for males during the same period of time was similar but less dramatic.

Gender Comparison of Alcohol Initiation: Compared to males, females tended to initiate alcohol use at later ages during the early decades of the post-World War II period. The data in Table 2.8 show that during 1951-55, the age-specific rates of incidence at ages 10-14 and 15-19 among females were about 9 (per thousand person-years of exposure) and 83, respectively; the corresponding rates among males were about 37 and 157. As late as 1976-80, males were still almost twice as likely as females to initiate alcohol use at ages 10-14: the age-specific rate at ages 10-14 equaled about 30 among females, versus 53 among males. However, by 1991-95, the remaining gender differences in age-specific rates were very small, and there were no statistically significant differences between male and female rates in 1991-95 based on the 1994-95 NHSDA data.

Age-Specific Rates of Alcohol Initiation During 1991-1995, by Gender

Figure 2-3



Over time, did patterns of substance initiation among women become more similar to those among men? (Continued)

Incidence of Marijuana Use

The average annual number of females who initiated marijuana use increased from 65,000 during 1961-65 to a peak of about 1.2 million during 1971-80. The annual number of female marijuana initiates then declined to about 740,000 during 1986-90 before increasing to about 826,000 during 1991-95. In contrast, the average annual number of males who initiated marijuana use peaked during 1971-75 at 1.36 million, and then declined to 811,000, before increasing again to about 962,000. (See Table 2.10.)

Rate of Marijuana Initiation: Women made up a smaller proportion of total marijuana initiates than men in each of the five-year periods between 1961-65 and 1991-95 (see Table 2.11). Yet the percentage of marijuana initiates who were female increased substantially between the early 1960s and the early 1990s, from 32% during 1961-65 to about 36% during 1965-70, and to between 45% and 48% during each of the five-year periods between 1971-75 and 1991-95. Thus, the years of most rapid gender convergence in marijuana initiation—the span of years from 1966 through 1975—coincided with the years of most rapid increase in marijuana initiation in the total surveyed population. As incidence of marijuana initiation increased to peak levels in the late 1960s and early 1970s, the number of female initiates rose more rapidly than the number of male initiates, bringing about levels of female initiation only moderately lower than corresponding male levels. Since 1971-75, the percentage of marijuana initiates who were female has fluctuated within a narrow range, increasing from 45% to 47% between 1971-75 to 1976-1980, and declining from a peak of 48% during 1981-90 to 46% during 1991-95.

Female Marijuana Initiation Aged 10-14: Between 1986-90 and 1991-95, females, as well as males, experienced a significant increase in the rate of marijuana initiation at age 10-14. The rate at age 10-14 increased by about 57% (from 14 to 22) among females and by approximately 27% (from 19 to 24) among males. Both the absolute increase and the percentage increase were larger among females than males.

Annual Changes in Number of Marijuana Initiates: Changes between 1961-65 and 1991-95 in the annual number of marijuana initiates among females, as well as among males, largely reflected changes in age-specific incidence rates, rather than changes in the size and age distribution of the population at risk of first use (see Table 2.10). Specifically, between 1961-65 and 1971-75, the average number of annual marijuana initiates among females increased from about 65,000 to 1.2 million. If the size and age distribution of the population had remained the same as during 1961-65, the average number of annual initiates would still have increased from about 83,000 during 1961-65 to about 1.1 million during 1971-75, about 84% of the observed increase. The number of females at risk of marijuana initiation did increase between 1961-65 and 1971-75, especially in adolescence and early adulthood (where risks of initiating marijuana use are relatively high), but such changes in population size and age distribution accounted only for about 16% of the increase in marijuana initiates.

About 52% of the decline in annual marijuana initiates among females between 1971-75 and 1986-90 (from about 1.2 million to 740,000) is due to declining age-specific rates of incidence, while the remaining 48% is due to a decline in numbers of adolescents and young adults who were at risk of first using marijuana. However, the increase in annual marijuana initiates among females between 1986-90 and 1991-95, from about 740,000 to 826,000, is due entirely to the increase in the age-specific rate of incidence at ages 10-14.

- Among females aged 10-14, the age-specific rate of first using marijuana increased from about 14 during 1986-90 (versus 19 for males) to 22 during 1991-95 (versus 24 for males).
- Similarly, the percentage of marijuana initiates aged 10-14 who were female increased rather than declined between 1986-90 and 1991-95, from 16% to 24%. As the data in Tables 2.10 and 2.11 show, the decline between 1986-90 and 1991-95 in the percentage of total marijuana initiates who were female, from 48% to 46%, is primarily attributable to a somewhat more rapid decline among females in the age-specific rate of marijuana initiation at the peak ages 15-19.
- Rates of incidence at ages 15-19 and at older ages continued to decline between 1986-90 and 1991-95, and the aging of the population between 1986-90 and 1991-95 acted to depress rather than to exacerbate the increase in marijuana initiates due to increasing incidence at ages 10-14.

CONCLUSIONS

Although gender differences in substance use have narrowed in recent years, females of the adult age groups continued to report a significantly lower rate, compared to males, of past-year alcohol, cigarette, marijuana, cocaine, and *any* illicit drug use. Furthermore, adult females were generally less likely than adult males to report "binge" and *heavy* alcohol use, as well as current use of alcohol, marijuana, and *any* illicit drugs. "Binge" and *heavy* alcohol use rates have remained significantly higher for male youths than for female youths in most of the years since 1985. However, among the 12- to 17-year-olds, rates of female and male past-month alcohol, cigarette, and illicit drug use have been small and the gender differences not statistically significant.

Compared to men, women were more likely to perceive great risks from *heavy* daily drinking, from *heavy* cigarette use, and from occasional marijuana use. The gender difference in perceived risks from substance use and abuse has remained relatively constant over time. However, the differences between males and females in perceived risks from *heavy* daily drinking and *heavy* cigarette use were substantially smaller among younger age groups than among older age groups. Moreover, the perceived risks from occasional marijuana use among females aged 12-17 were similar to those of their male contemporaries.

Finally, there was gender convergence in alcohol initiation during 1991-95. Compared to males, females tended to initiate alcohol use at later ages during the period between 1961-65 and 1986-90, but in 1991-95, the gender differences in age-specific rates of first alcohol use became negligible.

The percentage of marijuana initiates who were female increased substantially between the early 1960s and the early 1990s, but this percentage remained lower than the percentage of marijuana initiates who were male.

TABLES

Table 2.1 Percentage Reporting Lifetime Use of Substances[1] among Respondents Aged 12 and Older, by Gender and Types of Substance: 1979-1995

		1979	1982	1985	1988	1990	1991	1992	1993	1994	1995
Any Illicit Drug[2]	Females	25.4†	–	30.1	31.2	29.9	30.9	29.3	29.9	29.9	29.8
	Males	37.8	–	39.0	37.1	38.9	37.7	37.6	38.8	39.2	39.1
Marijuana	Females	22.4	23.6	24.5	27.6	26.1	26.8	25.9	26.4	26.8	26.8
	Males	33.9	34.0	34.7	33.9	35.2	34.6	34.8	35.9	35.9	35.6
Cocaine	Females	6.0†	8.7	7.9	8.4	8.9	8.9	8.7	8.4	8.2	7.9
	Males	11.5	15.0	14.7	13.0	13.7	14.2	13.4	14.4	12.9	12.8
Alcohol	Females	84.3	80.7	80.7	79.9	77.7	79.6	78.0	78.8	80.3	79.2
	Males	93.1†	90.8	89.6	88.5	87.1	88.0	86.2	86.7	88.4	85.8
Cigarettes	Females	–	–	71.6	71.8	69.8	70.5	66.9	68.2	67.8	66.9
	Males	–	–	85.1†	83.4	81.5	79.7	79.8	78.9	79.2	77.1

Table reads as follows: In 1979, 25.4% of females aged 12 and older reported lifetime use of *any* illicit drugs.

Notes: [1] For trend analysis of substance use and abuse, adjustments were made to previously published 1979-93 NHSDA estimates to make them comparable to estimates produced from the 1994 and 1995 NHSDAs, which were based on a new questionnaire implemented in 1994.

[2] Any illicit drug indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any prescription-type psychotherapeutics used nonmedically.

– Data are not available.

† Difference between estimate and 1995 estimate is statistically significant at $p < .05$ level.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse.

Table 2.2 Percentage Reporting Past-Year Use of Substances[1] among Respondents Aged 12 and Older, by Gender and Types of Substance: 1979-1995

		1979	1982	1985	1988	1990	1991	1992	1993	1994	1995
Any Illicit Drug[2]	**Females**	13.1†	--	13.3†	10.6	10.0	9.6	7.9	8.4	8.4	8.7
	Males	22.2†	--	19.7†	14.4	13.5	12.8	11.8	12.4	13.4	12.9
Marijuana	**Females**	12.3†	11.1†	10.2†	7.5	7.8	6.9	5.9	6.0	5.9	6.5
	Males	21.3†	21.2†	17.2†	12.4	11.2	11.1	10.2	11.1	11.3	10.5
Cocaine	**Females**	3.3†	3.7†	3.6†	2.5†	1.8	1.7†	1.5	1.1	1.1	1.2
	Males	6.4†	7.7†	6.8†	4.8†	3.7†	3.5†	2.8	2.8	2.4	2.3
Alcohol	**Females**	67.7†	61.5	68.2†	63.3	61.5	63.9	60.3	61.7	62.4	61.1
	Males	78.5†	74.9	78.0†	73.3	71.0	72.7	69.5	71.7	71.8	70.1
Cigarettes	**Females**	--	--	36.2†	34.4†	32.7	33.5	32.5	30.0	29.0	29.5
	Males	--	--	45.3†	43.1†	39.8†	39.1	38.1	36.7	34.8	34.6

Table reads as follows: In 1979, 13.1% of females aged 12 and older reported past-year use of *any* illicit drugs.

Notes: [1] For trend analysis of substance use and abuse, adjustments were made to previously published 1979-93 NHSDA estimates to make them comparable to estimates produced from the 1994 and 1995 NHSDAs, which were based on a new questionnaire implemented in 1994

[2] Any illicit drug indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any prescription-type psychotherapeutics used nonmedically.

-- Data are not available.

† Difference between estimate and 1995 estimate is statistically significant at $p < .05$ level.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse.

Table 2.3 Percentage Reporting Past-Month Use of Substances[1] among Respondents Aged 12 and Older, by Gender and Types of Substance: 1979-1995

		1979	1982	1985	1988	1990	1991	1992	1993	1994	1995
Any Illicit Drug[2]	**Females**	9.4†	--	9.5†	6.0	5.3	5.4	4.2	4.3	4.3	4.5
	Males	19.2†	--	14.9†	9.4	8.2	7.9	7.6	7.7	7.9	7.8
Marijuana	**Females**	8.7†	7.1†	7.1†	4.2	4.2	3.6	3.1	3.0	3.1	3.3
	Males	18.1	16.4†	12.6†	8.4†	6.8	6.8	6.4	6.4	6.7	6.2
Cocaine	**Females**	1.8†	1.5†	2.1†	1.0†	0.6	0.6	0.4	0.4	0.4	0.4
	Males	3.5†	3.4†	3.9†	2.2†	1.2	1.4	1.0	1.0	0.9	1.1
Alcohol	**Females**	54.9†	47.4†	52.0†	48.1	45.4	45.4	41.4	43.6	47.9	45.1
	Males	72.4†	66.8†	69.2†	62.3	60.5	59.6	57.2	58.7	60.3	60.1
"Binge" Alcohol[3]	**Females**	--	--	9.8	7.5	7.3	8.3	7.7	7.3	8.9	8.5
	Males	--	--	31.6†	23.2	22.1	23.5	21.9	22.7	24.7	23.8
Heavy Alcohol[4]	**Females**	--	--	3.2†	1.8	2.1	3.1†	2.7	1.9	2.5	2.1
	Males	--	--	13.8†	10.2	10.8	10.8	10.1	11.9	10.3	9.4
Cigarettes	**Females**	--	--	34.5†	31.4†	29.4	31.1†	30.0	27.3	26.0	26.8
	Males	--	--	43.4†	39.5†	36.0†	35.2	34.1	32.2	31.5	31.1

Table reads as follows: In 1979, 9.4% of females aged 12 and older reported past-month use of *any* illicit drugs.

Notes: [1] For trend analysis of substance use and abuse, adjustments were made to previously published 1979-93 NHSDA estimates to make them comparable to estimates produced from the 1994 and 1995 NHSDAs, which were based on a new questionnaire implemented in 1994.

[2] Any illicit drug indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any prescription-type psychotherapeutics used nonmedically.

[3] "Binge" alcohol use is defined as drinking five or more drinks on the same occasion on at least one day in the past 30 days.

[4] Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of five or more days in the past 30 days.

-- Data are not available.

†Difference between estimate and 1995 estimate is statistically significant at $p < .05$ level.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse.

Table 2.4 Percentage Reporting Past-Month Use of Substances[1] among Respondents Aged 12 - 17, by Gender and Types of Substance: 1979-1995

		1979	1982	1985	1988	1990	1991	1992	1993	1994	1995
Any Illicit Drug[2]	**Females**	13.5	--	12.0	7.9	6.6	5.6†	5.6†	5.1†	7.8	9.6
	Males	19.1†	--	14.4	8.4†	7.6†	6.1†	5.0†	6.2†	8.5†	12.1
Marijuana	**Females**	12.2	8.9	9.3	5.7	3.5†	3.1†	2.9†	3.5†	5.2†	7.4
	Males	16.1†	10.8	11.0	5.2†	5.2†	4.1†	3.8†	4.4†	6.8†	9.1
Cocaine	**Females**	0.8	1.5	1.1	0.9	0.5	0.3	0.3	0.4	0.3	0.7
	Males	2.2	2.4	1.9	1.5	0.8	0.5	0.2	0.5	0.3	0.8
Alcohol	**Females**	47.4†	33.8†	37.9†	31.1†	31.4†	24.2	19.3	23.5	21.1	19.6
	Males	51.8†	36.0†	44.4†	35.6†	33.6†	29.6†	22.4	24.3	22.1	22.5
"Binge" Alcohol[3]	**Females**	--	--	14.3†	11.0	11.5	9.3	6.9	7.0	7.1	6.2
	Males	--	--	29.3†	18.9†	19.2†	17.1†	12.9	14.9	9.5	9.4
Heavy Alcohol[4]	**Females**	--	--	4.2	2.6	2.0	4.2	1.3	1.5	1.9	1.9
	Males	--	--	*	5.4	6.7	7.7	5.4	5.3	3.1	3.5
Cigarettes	**Females**	--	--	27.9	21.5	21.2	18.8	18.4	17.8	18.2	19.7
	Males	--	--	30.9†	23.8	23.6	22.8	18.4	19.2	19.6	20.8

Table reads as follows: In 1979, 13.5% of females aged 12-17 reported past-month use of *any* illicit drugs.

Notes: [1] For trend analysis of substance use and abuse, adjustments were made to previously published 1979-93 NHSDA estimates to make them comparable to estimates produced from the 1994 and 1995 NHSDAs, which were based on a new questionnaire implemented in 1994.

[2] Any illicit drug indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any prescription-type psychotherapeutics used nonmedically.

[3] "Binge" alcohol use is defined as drinking five or more drinks on the same occasion on at least one day in the past 30 days.

[4] Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of five or more days in the past 30 days.

-- Data are not available.

† Difference between estimate and 1995 estimate is statistically significant at $p < .05$ level.

* Low precision; no estimate reported.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse.

Table 2.5 Percentage Reporting That Heavy Smoking[1] Is Great Risk, by Gender, Race/Ethnicity[2], and Age: 1985-1994[3]

		1985	1988	1990	1991	1992	1993	1994
Total	**Females**	61.1	66.1	67.6	67.4	67.8	69.6	66.8
	Males	51.7	57.7	57.8	58.4	59.1	60.1	56.0
White	**Females**	61.4	66.0	68.5	67.5	67.2	69.2	65.2
	Males	51.8	57.7	57.5	58.0	58.3	59.0	53.2
Black	**Females**	58.2	66.3	59.6	65.3	67.2	65.4	70.8
	Males	51.6	54.3	55.7	56.6	58.3	60.9	58.8
Hispanic	**Females**	62.3	69.0	74.1	73.7	77.1	76.7	77.5
	Males	55.2	65.6	62.6	65.4	68.3	71.1	71.0
12-17 Years	**Females**	45.7	49.6	53.2	51.2	52.0	54.2	51.3
	Males	44.5	44.5	43.0	45.1	45.0	48.2	40.4
18-25 Years	**Females**	56.4	56.0	58.1	60.7	61.2	63.6	65.3
	Males	48.0	53.7	56.3	55.5	54.2	53.8	54.4
26-34 Years	**Females**	62.6	64.7	63.7	66.8	66.8	69.8	71.9
	Males	54.0	58.8	63.4	59.0	61.2	60.2	57.9
35+ Years	**Females**	64.9	72.0	73.6	71.7	72.1	73.4	68.2
	Males	53.6	61.1	59.0	61.4	62.3	64.0	58.7

Table reads as follows: In 1979, 61.1% of females reported that heavy smoking is a great risk.

Notes: [1] Heavy smoking was defined as smoking one or more packs of cigarettes per day.

[2] Estimates on other race/ethnicity group are not presented because of low precision during most of the surveyed years.

[3] Data from 1979, 1982, and 1995 are not available.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1985-1993, 1994-A.

Table 2.6 Percentage Reporting That Heavy Daily Drinking[1] Is Great Risk, by Gender, Race/Ethnicity[2], and Age: 1985-1994[3]

		1985	1988	1990	1991	1992	1993	1994
Total	**Females**	78.7	78.1	82.3	75.8	78.3	77.7	74.7
	Males	65.1	62.9	68.6	62.2	62.0	60.0	57.7
White	**Females**	79.2	78.2	82.9	75.7	78.3	77.5	73.8
	Males	65.1	62.8	68.7	61.3	60.3	58.3	54.5
Black	**Females**	77.8	78.3	76.8	76.2	76.5	76.6	80.6
	Males	64.6	63.9	67.8	64.7	66.3	64.0	64.3
Hispanic	**Females**	75.9	77.8	81.8	77.3	80.8	79.4	78.8
	Males	69.1	64.1	66.6	67.0	70.0	68.0	66.3
12-17 Years	**Females**	69.3	66.5	72.7	64.1	65.9	64.3	59.9
	Males	61.6	55.3	61.7	54.6	56.1	54.3	48.1
18-25 Years	**Females**	72.4	75.0	74.0	71.0	70.5	72.3	72.6
	Males	60.8	57.8	59.7	54.1	57.0	55.0	52.3
26-34 Years	**Females**	78.2	78.8	78.3	76.0	76.6	74.3	74.1
	Males	61.0	63.1	66.5	60.9	56.0	58.5	57.3
35+ Years	**Females**	82.6	80.5	87.1	78.8	82.6	82.0	77.8
	Males	68.9	65.8	73.2	66.2	66.4	62.9	61.0

Table reads as follows: In 1979, 78.7% of females reported that heavy alcohol use is a great risk.

Notes: [1] Heavy alcohol use was defined as having four or five drinks nearly every day.

[2] Estimates on other race/ethnicity group are not presented because of low precision during most of the surveyed years.

[3] Data from 1979, 1982, and 1995 are not available.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1985-1993, 1994-A.

Table 2.7 Percentage Reporting That Occasional Marijuana Use is Great Risk, by Gender, Race/Ethnicity[1], and Age: 1985-1994[2]

		1985	1988	1990	1991	1992	1993	1994
Total	**Females**	44.2	51.8	48.7	45.7	47.8	47.1	47.1
	Males	37.3	46.5	40.0	37.3	40.5	40.5	36.0
White	**Females**	41.9	49.0	45.9	42.8	44.3	43.7	43.8
	Males	35.6	44.7	37.7	34.3	37.7	37.6	32.2
Black	**Females**	51.7	62.7	56.1	54.8	57.5	54.0	56.1
	Males	42.5	51.2	46.1	43.9	48.7	46.8	42.1
Hispanic	**Females**	59.1	62.8	61.3	59.5	63.3	61.7	59.3
	Males	49.0	54.4	50.3	50.5	53.4	52.0	50.8
12-17 Years	**Females**	34.3	41.9	51.5	50.0	33.4	47.7	43.2
	Males	39.6	45.9	52.1	46.9	29.7	47.4	40.3
18-25 Years	**Females**	22.8	32.6	33.2	32.1	33.4	34.5	33.1
	Males	19.9	29.0	26.6	25.4	28.4	30.4	28.9
26-34 Years	**Females**	30.0	34.0	31.7	30.0	55.0	31.6	33.7
	Males	18.3	27.9	30.1	25.5	45.8	26.2	23.1
35+ Years	**Females**	57.2	64.3	57.7	53.2	82.6	54.4	54.6
	Males	49.5	58.4	44.9	42.7	66.4	46.4	40.9

Table reads as follows: In 1979, 44.2% of females reported that occasional marijuana use is a great risk.

Notes: [1] Estimates on other race/ethnicity group are not presented because of low precision during most of the surveyed years.

[2] Data from 1979, 1982, and 1995 are not available.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1985-1993, 1994-A.

Table 2.8 Age-specific Rates of First Use[1] of Any Alcohol and Number of Annual Initiates of Alcohol Use, by Gender and Periods (1946-1950 through 1991-1995)[2]

	Age-specific Rate of First Use								Annual Initiates, Ages 10-29 in 1,000s (Age-standardized Initiates)		
	Age 10-14		Age 15-19		Age 20-24		Age 25-29[3]				
Years	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Total
1946-50	31.4	2.6	--	--	--	--	--	--	--	--	--
1951-55	36.5	8.9	157.1	83.4	--	--	--	--	--	--	--
1956-60	20.2	7.6	144.6	85.2	72.4	76.3	--	--	--	--	--
1961-65	26.9	10.1	127.2	101.1	135.9	104.3	51.7	55.5	1,175 (1,175)	1,343 (1,343)	2,518 (2,518)
1966-70	38.6	18.6	188.8	132.2	124.7	113.0	87.2	55.7	1,966 (1,630)	1,802 (1,688)	3,768 (3,359)
1971-75	48.1	29.5	181.5	153.9	148.3	118.2	64.7	46.8	2,076 (1,694)	2,061 (1,957)	4,137 (3,686)
1976-80	52.6	29.9	189.3	169.6	113.6	106.5	25.2	40.3	1,906 (1,705)	2,087 (2,026)	3,993 (3,745)
1981-85	59.5	36.5	177.7	150.6	107.4	92.7	40.8	36.6	1,716 (1,702)	1,754 (1,887)	3,470 (3,610)
1986-90	52.9	45.6	168.5	153.2	105.7	102.6	25.1	35.2	1,510 (1,579)	1,678 (2,025)	3,188 (3,622)
1991-95[2]	74.2	72.0	157.9	159.2	92.5	98.8	29.0	23.6	1,774 (2,116)	1,925 (2,853)	3,699 (4,980)

Tables reads as follows: Rate of first use of alcohol at ages 10-14 is 31.4 for males during 1946-50.

Notes: -- Results are not presented for birth cohorts older than aged 15 in 1946 because less than 75% of persons aged 15 or older in 1946 survived until the 1994-1995 NHSDA survey.

[1] Age-standardized numbers of initiates assuming that the size and distribution of population by age remained as in 1961-65. Standard errors of estimates in this column equal about 5% of the corresponding estimates.

[2] Rates of first use of alcohol for the period 1991-95 are projections based on 1991-1994 estimates, obtained from 1994-1995 NHSDA data.

[3] Essentially all initiates to alcohol and marijuana were aged less than 30 at the time of initiation. In this analysis, we focused on persons who were younger than 30 at the start of the time period being studied.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 2.9 Gender and Age Distributions of Alcohol Initiates: 1961-1965 through 1991-95[1]

	Years						
	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95
Females	**53.3**	**47.8**	**49.8**	**52.3**	**50.5**	**52.7**	**52.0**
Males	46.7	**52.2**	**50.2**	**47.7**	**49.5**	**47.4**	**48.0**
Females							
Ages 10-14	7.0	10.7	15.8	13.7	18.3	22.1	30.9
Ages 15-19	57.4	59.5	61.8	67.6	64.1	59.7	54.0
Ages 20-24	28.1	23.5	18.5	15.6	14.3	15.0	12.9
Ages 25-29[2]	7.5	6.3	3.8	3.1	3.3	3.2	2.2
Males							
Ages 10-14	20.2	19.4	22.8	24.2	28.4	28.2	35.4
Ages 15-19	61.1	65.8	61.9	65.5	60.7	60.6	54.4
Ages 20-24	16.0	11.6	12.8	9.4	9.2	9.9	8.7
Ages 25-29[2]	2.7	3.3	2.6	0.9	1.7	1.3	1.6

Tables reads as follows: During 1961-65, 53.3% of total alcohol initiates were female, and 7% of total female alcohol initiates were aged 10-14.

Notes: [1] Data for three periods (1946-50, 1951-55, and 1956-60) are not presented, because the number of persons first using alcohol was not estimated for persons aged 15 or older in 1946, as less than 75% of persons aged 15 or older in 1946 survived until the 1994-1995 NHSDA survey.

[2] Essentially all initiates to alcohol and marijuana were aged less than 30 at the time of initiation. In this analysis, we focused on persons who were younger than 30 at the start of the time period being studied.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 2.10 Age-specific Rates of First Use[1] of Marijuana and Number of Annual Initiates of Marijuana Use, by Gender and Periods (1946-1950 through 1991-1995)[2]

Years	Age-specific Rate of First Use								Annual Initiates, Ages 10-29[3] in 1,000s (Age-standardized Initiates)		
	Age 10-14		Age 15-19		Age 20-24		Age 25-29[3]				
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Total
1946-50	0.0	1.3	--	--	--	--	--	--	--	--	--
1951-55	3.3	0.0	5.0	0.0	--	--	--	--	--	--	--
1956-60	0.0	0.2	6.1	4.3	1.7	0.0	--	--	--	--	--
1961-65	1.8	0.4	10.7	4.0	6.5	4.0	2.5	0.3	138 (138)	65 (83)	203 (203)
1966-70	14.6	7.5	60.0	34.7	48.6	19.8	16.3	5.3	1,081 (886)	597 (521)	1,678 (1,423)
1971-75	22.6	19.3	99.4	74.6	49.1	30.3	14.4	10.7	1,512 (1,237)	1,238 (1,067)	2,750 (2,321)
1976-80	30.3	21.1	101.3	79.5	36.6	24.3	5.5	10.2	1,352 (1,218)	1,205 (1,083)	2,557 (2,310)
1981-85	27.2	16.9	80.1	69.4	21.3	18.6	4.4	5.9	953 (955)	892 (900)	1,846 (1,860)
1986-90	18.9	14.2	73.5	64.1	20.9	18.2	5.6	2.9	811 (834)	740 (810)	1,551 (1,651)
1991-95	23.9	22.0	68.3	54.8	18.8	16.5	2.1	1.6	962 (1,022)	826 (986)	1,788 (2,022)

Tables reads as follows: Rate of first use of marijuana at ages 10-14 is 0 for males during 1946-50.

Notes: -- Results are not presented for birth cohorts older than age 15 in 1946 because less than 75% of persons aged 15 or older in 1946 survived until the 1994-1995 NHSDA survey.

[1] Age-standardized numbers of initiates assuming that the size and distribution of population by age remained as in 1961-65. Standard errors of estimates in this column equal about 5% of the corresponding estimates.

[2] Rates of first use of marijuana for the period 1991-95 are projections based on the 1991-1994 estimates, obtained from the 1994-1995 NHSDA data.

[3] Essentially all initiates to alcohol and marijuana were aged less than 30 at the time of initiation. In this analysis, we focused on persons who were younger than 30 at the start of the time period being studied.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 2.11 Gender and Age Distributions of Marijuana Initiates: 1961-1965 through 1991-1995[1]

Ages	Years						
	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95
Females	**32.0**	**35.6**	**45.0**	**47.1**	**48.3**	**47.7**	**46.2**
Males	**68.0**	**64.4**	**55.0**	**52.9**	**51.6**	**52.3**	**53.8**
Females							
Ages 10-14	5.4	13.3	17.6	17.0	17.0	16.0	23.9
Ages 15-19	51.8	54.3	57.6	63.4	65.3	67.7	60.5
Ages 20-24	40.1	26.7	18.4	14.0	13.7	14.0	14.3
Ages 25-29[2]	2.7	5.6	6.4	5.6	4.0	2.3	1.3
Males							
Ages 10-14	12.0	14.1	15.5	20.5	24.6	19.8	23.4
Ages 15-19	56.1	49.4	59.3	62.7	62.3	64.8	63.4
Ages 20-24	23.6	29.2	20.2	14.7	11.0	12.3	12.0
Ages 25-29[2]	8.2	7.4	5.0	2.0	2.1	3.0	1.2

Tables reads as follows: During 1961-65, 32.0% of total marijuana initiates were female, and 5.4% of total female marijuana initiates were aged 10-14.

Notes: [1] Data for three periods (1946-50, 1951-55, and 1956-60) are not presented, because the number of persons first using alcohol was not estimated for persons aged 15 or older in 1946, as less than 75% of persons aged 15 or older in 1946 survived until the 1994-1995 NHSDA survey.

[2] Essentially all initiates to alcohol and marijuana were aged less than 30 at the time of initiation. In this analysis, we focused on persons who were younger than 30 at the start of the time period being studied.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

3. PATTERNS OF SUBSTANCE USE AMONG WOMEN

In this chapter we use data from the 1994 and 1995 NHSDA to document patterns of lifetime and past-year alcohol, cigarette, and illicit drug use among women in the U.S., and to describe the epidemiology of heavy use of alcohol and cigarettes and problem drug use among women. In addition, we examine variations in patterns of substance use among subgroups of women defined by race/ethnicity and marital status.

INTRODUCTION: Although some research has suggested that alcohol, cigarette, and illicit drug use among women has increased in recent years, the patterns of substance use by women, particularly young adult women, have not been well documented. Further, research to date has not investigated differences in substance use and abuse among women in different sociodemographic subgroups.

Therefore, we examine patterns of lifetime and past-year use of alcohol, cigarettes, and illicit drugs among women and men, using NHSDA data on the prevalence of alcohol, cigarette, marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical psychotherapeutic drug use in 1994 and 1995.[1] The 1994 and 1995 NHSDA surveys provide the most current information available on the extent of use of alcohol, cigarettes, and illicit drugs in the non-institutionalized population of the United States.

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[1] For analyses of patterns of substance use, we use the 1994-B data, which were obtained from a subsample of respondents to the 1994 NHSDA. In the 1994-B version, the survey questionnaire and editing procedures underwent changes designed to improve the measurement of trends, reduce data processing time, and improve the quality of the data (see Appendix A for a detailed discussion of the split sample design in 1994).

REFERENCE TO TABLES AND FIGURES

FIGURE IN TEXT

3-1 Percentage of Respondents Aged 12 and Older Reporting Past-Year Substance Use, by Gender. Page 3-6

TABLES AT END OF CHAPTER

3.1 Percentage Reporting Substance Use in Their Lifetime, for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995. Pages 3-14, 3-15

3.2 Percentage Reporting Substance Use in the Past Year, for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995. Pages 3-16, 3-17

3.3 Percentage Reporting Substance Use in the Past Year and in the Past Month, for Persons Aged 12 and Older, by Gender and Patterns of Substance, Controlling for Other Demographic Characteristics: 1994-1995. Pages 3-18

3.4 Relative Likelihood of Any Illicit Drug Use, Psychotherapeutics Use and Problem Drug Use in the Past Year, and Heavy Alcohol Use in the Past Month, for Persons Aged 18 and Older, Controlling for Demographic Characteristics: 1994-1995. Page 3-19

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3.10 Relative Likelihood of Any Illicit Drug Use and Problem Drug Use in the Past Year, for Women Aged 18 and Older, Controlling for Demographic Characteristics: 1994-1995. Page 3-25

RESEARCH QUESTIONS:

- ❒ **To what extent do women's patterns of substance use differ from those of men?** ***(Pages 3-5 through 3-7)***

- ❒ **How do gender differences in patterns of substance use vary by race/ethnicity?** ***(Pages 3-8, 3-9)***

- ❒ **How do patterns of substance use vary with women's marital status? Do marital status differences in the prevalence of substance use exist across various demographic subgroups including age, race/ethnicity, education level, employment status, household member receiving welfare assistance, and number of children under age 18 living in the household?** ***(Pages 3-10, 3-11)***

MEASURES

We have created a summary variable of *any* illicit drug use, which includes marijuana, cocaine (including crack), inhalants, hallucinogens, heroin, and nonmedical use of psychotherapeutics.

In addition, we have created measures of *heavy* alcohol and cigarette use, substance dependence, and problem drug use.

- **HEAVY ALCOHOL USE** is defined as having consumed five or more drinks per occasion on 5 or more days in the previous 30 days.

- **HEAVY CIGARETTE USE** is defined as having smoked one pack or more of cigarettes each day in the 30 days preceding the interview.

- **SUBSTANCE DEPENDENCE** is defined as dependence on alcohol and/or one or more illicit drugs. It is determined by two responses: the substance was used in the past year, and the user reported meeting three of the dependence criteria[2], similar to those specified in the DSM-IV (American Psychiatric Association, 1994).

- **PROBLEM DRUG USE**, also sometimes referred to as "drug abuse," is defined in this chapter, and for chapters 4 and 8, as dependence on *any* illicit drug in the past year using criteria similar to those of the DSM-IV; frequent drug use in the past year (i.e., using marijuana daily or more; or using cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more); injection drug use in the past year; *any* heroin use in the past year; or having received treatment for drug use in the past year.

Further, this chapter includes **DEMOGRAPHIC CHARACTERISTICS**, such as age, education, race/ethnicity, employment, and marital status, to examine the patterns of substance use and abuse among women across varying sociodemographic characteristics.

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[2] It is important to note that questions used to estimate drug dependence were changed slightly from 1994 to 1995. The questions used to estimate drug dependence in 1994 were designed to approximate 5 of the 7 DSM-IV criteria, while the questions used to estimate drug dependence in 1995 were developed to approximate 6 of the 7 DSM-IV criteria. Respondents were defined as dependent for a specific drug in 1994 if they indicated they had used that drug in the past year and met 3 of the 5 DSM-IV criteria covered by the 1994 dependence questions. In 1995, respondents were classified as dependent for a specific drug if they indicated they had used that drug in the past year and met 3 of the 6 DSM-IV criteria covered by the 1995 dependence questions. (See Appendix A for questions used to determine alcohol or drug dependence.) The DSM-IV-based estimates of drug dependence for the 1994 data are comparable to those for the 1995 data (Epstein and Gfroerer, 1997).

❒ To what extent do women's patterns of substance use differ from those of men?

Among females aged 12 and older, more than two-thirds (68%) indicated that they had used cigarettes in their lifetime, four-fifths (80%) reported lifetime alcohol use, more than one-quarter (27%) reported lifetime marijuana use, and about one-third (30%) reported lifetime use of *any* illicit drug.

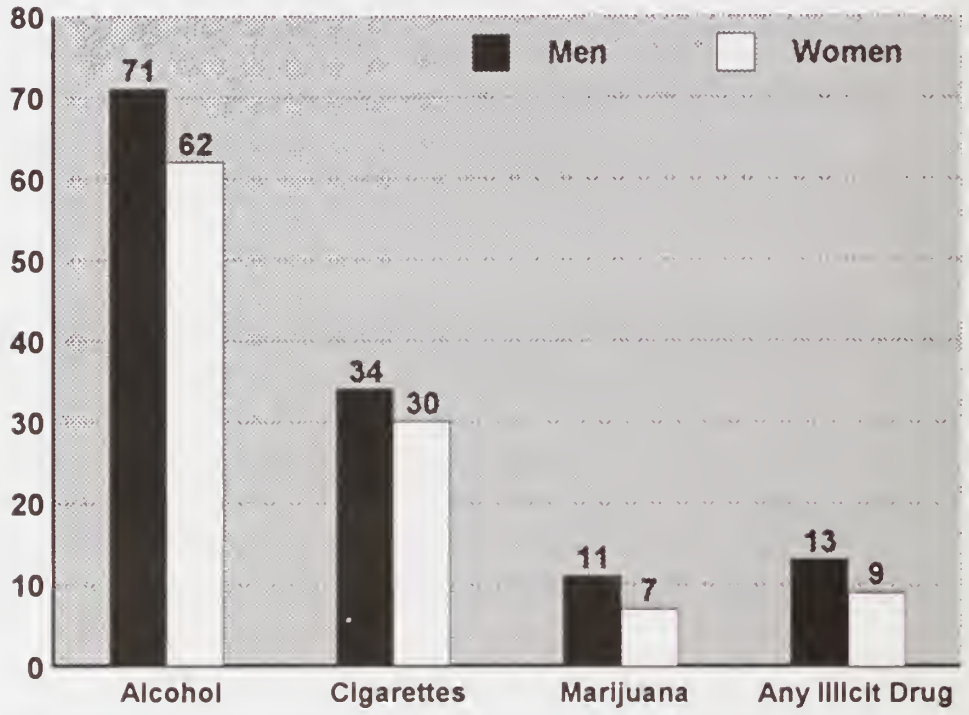
Gender Differences in Lifetime Use: Compared to their male counterparts, females aged 12 and older were generally less likely to report lifetime use of cigarettes, alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, psychotherapeutics, and *any* illicit drug. These gender differences in lifetime use were also found within subgroups of men and women defined by demographic characteristics such as race/ethnicity, education, employment status, and marital status (see Table 3.1.)

Gender Differences in Lifetime Use among Adolescents: In general, rates of lifetime substance use were similar for females and males aged 12-17. However, there were some small but statistically significant differences. Females aged 12-17 reported a significantly lower prevalence of lifetime cigarette, marijuana, and *any* illicit drug use than males aged 12-17 (see Table 3.1.)

Gender Differences in Past-Year Use: The patterns of gender difference for *past-year* use of alcohol, cigarettes, marijuana, and illicit drugs other than marijuana among persons aged 12 and older were generally similar to those for *lifetime* use. An exception is that the differences were not statistically significant between males and females in the prevalence of heroin use and nonmedical use of psychotherapeutic drugs. (See Figure 3–1 on next page and Table 3.2.)

Percentage of Respondents Aged 12 and Older Reporting Past-Year Substance Use, by Gender

Figure 3–1



Gender Differences in Past-Year Use Among Adolescents: Among adolescents aged 12-17, the prevalence of past-year nonmedical psychotherapeutic drug use was greater among females than among males (4.4% versus 3.1%). This is in contrast to most other substances, where adolescent males and females reported similar rates of past-year use.

Gender Differences in Heavy Cigarette and Alcohol Use and Problem Drug Use: Males aged 12 and older tended to report higher levels of lifetime and past-year use of nearly all substances than did females aged 12 and older. Furthermore, the gender differences for *heavy* use of alcohol and cigarettes and for problem drug use were generally greater than those for *any* past-year substance use.

- **Cigarette Use:** Males aged 12 and older were about 1.2 times as likely as females to report past-year cigarette use (34% versus 30%), and 1.4 times as likely as females to report *heavy* cigarette use (15% versus 11%—see Table 3.3).

- **Alcohol Use:** Among persons aged 12 and older, about 71% of males compared with 62% of females reported past-year alcohol use; while 9% of males but only 3% of females reported *heavy* alcohol use.

- **Any Illicit Drug Use:** Although males aged 12 and older were only about 1.5 times as likely as their female counterparts to report *any* illicit drug use in the past year (13% versus 9%), they were twice as likely as females (4% versus 2%) to report past-year problem drug use (see Table 3.3).

Summary: After statistically adjusting for age, race/ethnicity, education, employment status, and marital status, gender was found to remain significantly associated with past-month *heavy* alcohol use, past-year use of *any* illicit drug, and past-year problem drug use among adults aged 18 and older (see Table 3.4). Relative to adult women, adult men were about 4.2 times as likely to have used alcohol heavily in the past month, about 1.6 times as likely to have used *any* illicit drug in the past year, and approximately 2.4 times as likely to report problem drug use in the past year.

However, among adults aged 18 and older, after controlling for other demographic variables, men and women were equally likely to report past-year use of *any* psychotherapeutic drug (see Table 3.4).

❒ How do gender differences in patterns of substance use vary by race/ethnicity?

Adults Aged 18 and Older

The prevalence of past-year drug use among adults aged 18 and older varied substantially among subgroups defined by both gender and race/ethnicity. Within each major racial/ethnic group (white, black, Hispanic, and Asian/Pacific Islander), adult women were less likely than adult men to report past-year cigarette use. Past-year prevalence of alcohol, marijuana, and a*ny* illicit drug use were also much lower for women than for men within these same racial/ethnic groups (see Table 3.5).

- **Cigarette Use:** Among adults aged 18 and older, the prevalence of past-year cigarette use was highest among Hispanic men, followed by similar levels of use by black and white men. Levels of past-year smoking were somewhat lower among white women, black women, and Asian/Pacific Islander men, and they were lowest among Hispanic and Asian/Pacific Islander women (see Table 3.5).

- **Any Illicit Drug Use:** The prevalence of past-year use of a*ny* illicit drug among adults followed a pattern similar to that of past-year cigarette use, except that black men rather than Hispanic men reported the highest prevalence of past-year use of *any* illicit drug. Among women, American Indians reported the highest prevalence of past-year use of a*ny* illicit drug.

- **Alcohol Use:** Among adults aged 18 and older, the prevalence of past-year alcohol use exhibited slightly different patterns: levels of past-year alcohol use were highest among Hispanic and white men; somewhat lower among white women, black men, and Asian/Pacific Islander men; and lowest among black, Hispanic, and Asian/Pacific Islander women.

Adolescents Aged 12-17

In the 12-17 age group, gender comparisons within racial/ethnic groups indicated that there was only one significant gender difference in the level of past-year substance use: black males were more likely than black females to report past-year marijuana use (see Table 3.6).

Among adolescents aged 12-17, the prevalence of past-year cigarette use was highest among white males and females, followed by Hispanic males and females, black males and females, and Asian/Pacific Islander males and females (see Table 3.6). Patterns of gender difference in the prevalence of past-year alcohol use resembled those of past-year cigarette use.

❒ How do patterns of substance use vary with women's marital status? Do marital status differences in the prevalence of substance use exist across various demographic subgroups including age, race/ethnicity, education level, employment status, household member receiving welfare assistance, and number of children under age 18 living in the household?

Among women aged 18 and older, the prevalence of past-year substance use varied substantially with marital status.

Cigarette Use: Adult women who were divorced or separated were more likely than adult married or never-married women to report past-year cigarette use (see Table 3.2). In general, this pattern persisted within subgroups defined by age, race/ethnicity, education, employment, and number of children under age 18 with whom the woman was living (see Table 3.7). However, notably, levels of past-year smoking did not differ by marital status among adult women whose household member had received welfare assistance in the past year.

Heavy Cigarette Use: Among women aged 18 and older, those who were divorced/separated reported the highest prevalence of *heavy* smoking, followed by those who were married, and then by those who had never been married (see Table 3.3). Closer examination indicates that only among adult women aged 35-49 did never-married women report significantly higher levels of *heavy* smoking than married women (see Table 3.7).

Alcohol Use: Compared to adult women who were divorced/separated, married women reported a significantly lower prevalence of alcohol use in the past year (see Table 3.2). However, when the data are broken down by education, this holds true only among adult women with a high school degree or less (see Table 3.8).

Heavy Alcohol Use: Overall and within most demographic subgroups, married women also reported significantly lower rates of past-month *heavy* alcohol use than women who were never married or who were divorced or separated.

Any Illicit Drug Use: Among adults aged 18 and older, never-married women were far more likely to report *any* illicit drug use in the past year compared with both married and divorced/separated women. Additionally, women who were divorced/separated were more likely than married women to have used *any* illicit drug in the past year. Within each demographic subgroup (with the exception of the 50 and older age group), married women reported lower rates of *any* past-year illicit drug use than did never- married or divorced/separated women.

Interestingly, divorced/separated women did not have a significantly lower prevalence of *any* past-year illicit drug use than never-married women within some sociodemographic subgroups. In particular, rates of past-year illicit drug use were higher among divorced/separated women than among never-married women in each age group, although these differences were not statistically significant (see Table 3.9).

Problem Drug Use: As was the case for *any* illicit drug use, adult married women were less likely to report problem drug use than were unmarried (both divorced/separated and never-married) adult women (see Table 3.3). The pattern generally held within most demographic subgroups.

Association of Marital Status with Self-Reported Drug Use

Marital status was found to be associated with women's self-reported past-year illicit drug use and problem drug use, after statistically adjusting for age, race/ethnicity, education, a household member receiving welfare assistance, and number of children under age 18 with whom the woman was living (see Table 3.10).

Divorced or Separated: Relative to adult women who were married, divorced or separated women were about 3.1 times as likely to report using *any* illicit drug in the past year, and approximately 2.7 times as likely to report problem drug use in the past year.

Never Married: Moreover, women who had never married were about 2.6 times as likely as married women to have used *any* illicit drug in the past year and 2.6 times as likely to report past-month problem drug use.

CONCLUSIONS

Among those aged 12 and older, women were generally less likely than men to report lifetime use of alcohol, cigarettes, marijuana, and illicit drugs other than marijuana (e.g., cocaine and heroin). The gender difference in lifetime use remained when a number of demographic characteristics were statistically controlled.

Similarly, among adolescents aged 12-17, females were less likely than males to report lifetime use of cigarettes, marijuana, and *any* illicit drug. However, these differences between males and females in this 12-17 age group were small, and the lifetime prevalence of alcohol use and use of illicit drugs other than marijuana did not differ by gender.

Females aged 12 and older also reported a significantly lower prevalence of past-year substance use than males aged 12 and older, with the exception of heroin and psychotherapeutic drugs, where the gender disparity did not reach statistical significance. The differences in past-year substance use were consistent across various demographic subgroups for those aged 12 and older.

In contrast to the overall patterns of gender difference in the population aged 12 and older, male and female adolescents reported similar levels of past-year use of most substances, although among adolescent females the prevalence of past-year psychotherapeutics use was significantly higher than it was among adolescent males.

Among adolescents aged 12-17 there were few gender differences by race/ethnicity in the prevalence of substance use. The only notable difference occurred among black adolescents, where females were significantly less likely than males to report past-year marijuana use. Moreover, white adolescent females used cigarettes, alcohol, and illicit drugs at higher rates than black, Hispanic, and Asian/Pacific Islander adolescent males.

Divorced/separated or never-married women were more likely than married women to report *any* past-year illicit drug use, even when comparisons were made by selected demographic characteristics such as age, education, race/ethnicity, household members receiving welfare assistance, and number of children under age 18 living with the women (see Table 3.10). These findings are consistent with the results of previous research using nationally representative and local area samples (i.e., Bachman et al., 1997; Yamaguchi and Kandel, 1985).

TABLES

Table 3.1 Percentage Reporting Substance Use in Their Lifetime, for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995

	Cigarettes		Alcohol		Marijuana		Cocaine		Heroin	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Total	77.4	68.1	86.6	80.2	35.3	27.2	12.7	8.2	1.6	0.6
Age Groups (Years)										
12 - 17	39.9	35.6	42.2	40.0	16.1	13.7	1.7	2.0	0.4	0.6
18 - 25	71.7	65.2	87.2	83.5	44.5	38.8	12.2	9.6	1.0	0.5
26 - 34	78.1	73.6	93.1	88.8	55.1	49.5	25.0	19.6	2.1	1.0
35 - 49	84.8	76.3	94.7	89.9	52.2	38.8	20.9	11.5	3.2	0.9
50+	86.8	69.3	91.3	78.5	9.6	6.0	1.7	0.9	0.6	0.1
Race/Ethnicity										
White	81.0	73.4	89.0	84.7	37.2	30.0	13.4	9.3	1.5	0.5
Black	66.1	58.3	77.7	69.8	35.0	22.0	11.9	4.7	2.9	0.7
Hispanic	68.0	49.0	83.5	64.4	26.1	15.7	10.8	4.9	1.3	0.5
Other	58.7	40.8	67.8	61.7	18.6	15.7	6.2	3.8	1.0	1.2
Adult Education[1]										
Less than high school	84.2	67.7	89.2	72.5	28.3	19.5	11.1	6.5	2.4	0.5
High school graduate	83.1	71.7	91.0	83.7	36.2	26.6	14.9	8.4	1.7	0.7
Some college	81.8	75.6	93.9	90.7	44.5	32.6	17.2	8.9	2.2	0.6
College graduate	79.6	70.6	94.2	90.5	40.7	36.3	12.8	11.7	1.1	0.4
Current Employment[2]										
Full-time	82.3	74.9	94.1	90.1	45.9	37.2	17.4	11.9	1.8	0.6
Part-time	74.9	74.2	88.1	88.4	32.3	34.3	12.3	9.3	1.4	0.6
Unemployed	82.1	71.9	89.7	86.3	52.9	38.8	22.9	15.0	4.8	1.8
Other	84.3	67.0	89.0	77.0	14.9	16.3	4.2	4.7	1.1	0.4
Marital Status[3]										
Married	84.2	72.8	93.0	85.6	33.5	27.3	11.2	7.5	1.2	0.3
Widowed	80.0	61.1	90.2	72.1	5.5	3.6	*	0.8	*	*
Divorced or separated	89.5	81.4	95.3	90.7	53.2	39.6	28.4	15.1	5.5	1.8
Never married	69.5	63.0	82.6	78.2	42.2	35.8	14.7	10.9	1.5	0.9

Table reads as follows: In 1994-1995, 77.4% of men aged 12 and older reported that they had used cigarettes in their lifetime.

Notes: * Low precision; no estimate reported.

[1] Data on adult education are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[2] Data on current employment are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[3] Data on marital status are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.1 Percentage Reporting Substance Use in Their Lifetime for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995

(Continued)	Hallucinogens		Inhalants		Psychotherapeutics		Any Illicit Drug Use	
	Men	Women	Men	Women	Men	Women	Men	Women
Total	11.5	6.9	7.8	3.9	11.4	8.8	38.7	30.2
Age Groups (Years)								
12 - 17	5.0	4.4	7.5	6.9	5.7	6.9	22.4	20.1
18 - 25	16.4	12.3	13.6	7.7	12.1	11.1	49.2	43.0
26 - 34	18.6	12.2	13.1	6.8	17.0	14.3	58.6	52.4
35 - 49	17.7	9.9	8.8	3.4	17.7	12.7	54.8	41.8
50+	1.3	0.5	1.0	0.4	3.8	2.5	12.3	7.6
Race/Ethnicity								
White	13.2	8.2	9.0	4.5	12.7	10.1	40.5	33.1
Black	5.2	1.9	3.2	1.5	7.1	4.9	38.3	24.8
Hispanic	7.6	3.7	4.9	2.3	7.6	5.6	30.7	19.4
Other	5.5	4.1	4.1	2.2	6.6	4.1	23.3	17.9
Adult Education[1]								
Less than high school	9.6	4.9	6.2	2.5	9.5	6.1	31.2	21.5
High school graduate	11.9	6.8	7.2	3.2	12.0	8.7	39.5	29.4
Some college	15.2	8.0	9.7	4.0	14.1	9.6	47.1	35.5
College graduate	12.5	9.0	8.2	4.7	12.8	11.5	44.1	39.1
Current Employment[2]								
Full-time	14.7	9.3	9.3	4.6	14.5	10.5	49.1	39.9
Part-time	12.0	8.3	8.4	4.0	13.1	12.5	36.9	37.8
Unemployed	22.2	12.9	13.2	6.8	17.6	14.8	56.3	43.5
Other	4.1	3.8	2.6	1.9	4.6	5.5	17.2	18.3
Marital Status[3]								
Married	9.3	5.8	5.0	2.6	10.0	8.5	36.1	29.8
Widowed	1.2	0.5	*	0.2	2.0	1.9	8.3	4.9
Divorced or separated	21.6	11.4	12.9	5.3	23.8	13.1	57.8	42.6
Never married	16.1	11.4	13.2	7.6	13.1	11.2	46.6	40.0

Table reads as follows: In 1994-1995, 11.5% of men aged 12 and older reported that they had used hallucinogens in their lifetime.

Notes: * Low precision; no estimate reported.

[1] Data on adult education are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[2] Data on current employment are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[3] Data on marital status are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.2 Percentage Reporting Substance Use in the Past Year, for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995

	Cigarettes		Alcohol		Marijuana		Cocaine		Heroin	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Total	34.4	29.5	70.6	62.1	10.9	6.5	2.3	1.3	0.2	0.1
Age Groups (Years)										
12 - 17	26.4	24.7	35.8	35.5	13.4	12.2	1.3	1.5	0.4	0.4
18 - 25	44.4	39.2	81.4	73.8	25.4	18.3	5.0	3.0	0.2	0.1
26 - 34	40.1	34.4	81.3	74.6	14.7	8.6	4.4	2.2	0.3	0.1
35 - 49	39.3	32.4	78.1	72.2	9.2	4.8	2.2	1.1	0.1	0.1
50+	24.6	22.3	65.0	50.8	1.4	0.5	0.1	0.2	0.2	*
Race/Ethnicity										
White	34.6	31.0	72.7	66.1	10.6	6.7	2.0	1.2	0.1	0.1
Black	33.0	28.8	59.7	50.8	13.2	7.2	3.5	1.5	0.9	0.2
Hispanic	36.1	22.1	71.1	49.9	9.1	5.0	3.1	1.1	0.3	0.1
Other	30.4	20.5	54.9	46.1	6.4	4.2	1.4	*	*	0.0
Adult Education[1]										
Less than high school	44.0	34.8	63.8	45.4	10.0	5.9	3.8	1.5	0.5	0.2
High school graduate	42.9	32.8	72.7	64.0	10.1	5.6	2.8	1.4	0.1	0.1
Some college	35.6	32.7	78.7	71.8	13.4	6.5	2.4	1.3	0.2	0.1
College graduate	20.1	17.7	82.5	77.1	7.9	5.5	0.9	0.6	0.0	0.1
Current Employment[2]										
Full-time	36.6	33.7	80.2	75.2	10.6	7.1	2.5	1.4	0.1	*
Part-time	33.2	28.6	78.5	72.5	15.3	7.7	3.1	1.1	0.2	0.2
Unemployed	54.8	41.9	78.9	68.6	22.6	12.2	7.4	5.1	0.4	0.7
Other	29.3	25.4	59.1	50.5	4.6	3.2	0.9	0.7	0.3	0.1
Marital Status[3]										
Married	30.6	25.5	72.5	65.1	5.3	2.9	1.1	0.5	*	*
Widowed	22.8	21.9	57.7	42.1	*	0.5	*	*	*	*
Divorced or separated	54.1	46.8	83.1	70.6	15.1	9.4	4.9	3.0	0.5	0.2
Never married	41.1	36.7	74.3	68.5	22.5	17.0	4.6	2.8	0.2	0.3

Table reads as follows: In 1994-1995, 34.4% of men aged 12 and older reported that they had used cigarettes in the past year.

Note: * Low precision; no estimate reported.

[1] Data on adult education are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[2] Data on current employment are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[3] Data on marital status are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.2 Percentage Reporting Substance Use in the Past Year, for Persons Aged 12 and Older, by Gender and Types of Substance, Controlling for Other Demographic Characteristics: 1994-1995

(Continued)	Hallucinogens		Inhalants		Psychotherapeutics		Any Illicit Drug Use	
	Men	Women	Men	Women	Men	Women	Men	Women
Total	1.9	1.1	1.4	0.8	3.1	2.7	13.0	8.7
Age Groups (Years)								
12 - 17	3.7	3.6	4.3	4.4	3.1	4.4	17.3	16.2
18 - 25	6.5	3.9	4.2	2.0	6.0	5.5	28.8	21.5
26 - 34	1.7	0.7	0.9	0.5	4.7	3.7	17.8	11.7
35 - 49	0.7	0.4	0.5	0.1	3.2	2.9	11.7	7.6
50+	0.2	*	*	*	0.6	0.5	2.2	1.0
Race/Ethnicity								
White	2.1	1.3	1.5	0.9	3.3	3.1	12.9	9.1
Black	0.8	0.2	0.6	0.2	2.3	2.0	16.3	9.2
Hispanic	1.6	0.8	1.2	0.6	2.6	1.7	11.9	6.8
Other	1.1	1.0	0.5	0.6	1.2	0.9	7.6	5.7
Adult Education[1]								
Less than high school	1.7	0.9	0.9	0.2	3.2	2.3	12.7	7.5
High school graduate	1.6	0.8	1.1	0.6	3.0	3.2	12.3	8.3
Some college	2.5	1.0	1.4	0.5	4.2	2.5	16.0	8.4
College graduate	0.9	0.6	0.7	0.3	2.2	1.7	9.6	7.2
Current Employment[2]								
Full-time	1.4	0.9	0.9	0.5	3.3	2.8	12.9	9.3
Part-time	3.7	1.1	2.0	0.5	3.9	3.8	17.9	10.2
Unemployed	3.5	3.6	1.8	0.8	5.5	5.7	26.4	16.7
Other	1.0	0.3	0.7	0.3	1.7	1.5	6.1	4.6
Marital Status[3]								
Married	0.3	0.3	0.1	0.1	1.6	1.9	6.7	4.8
Widowed	*	*	*	*	*	0.4	4.1	0.9
Divorced or separated	2.4	0.8	0.8	0.2	5.6	4.1	18.9	12.4
Never married	5.2	3.8	3.7	2.4	5.8	5.1	26.1	20.2

Table reads as follows: In 1994-1995, 1.9% of men aged 12 and older reported that they had used hallucinogens in the past year.

Notes: * Low precision; no estimate reported.

[1] Data on adult education are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[2] Data on current employment are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[3] Data on marital status are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.3 Percentage Reporting Substance Use in the Past Year and in the Past Month, for Persons Aged 12 and Older, by Gender and Patterns of Substance Use, Controlling for Other Demographic Characteristics: 1994-1995

	Past-Month Heavy Cigarette Use[1]		Past-Month Heavy Alcohol Use[2]		Past-Year Substance Dependence		Past-Year Problem Drug Use[3]	
	Men	Women	Men	Women	Men	Women	Men	Women
Total	15.2	10.8	9.4	2.6	6.1	3.2	4.3	2.2
Age Groups (Years)								
12 - 17	2.2	1.3	3.3	1.9	4.4	5.7	4.4	4.7
18 - 25	11.2	9.2	18.9	6.4	15.6	8.5	8.9	4.3
26 - 34	17.2	12.6	12.7	3.3	9.3	5.0	5.6	2.8
35 - 49	21.6	15.3	9.4	2.7	6.4	3.3	4.1	2.1
50+	14.5	9.4	5.5	0.9	2.4	0.6	1.5	0.4
Race/Ethnicity								
White	17.5	12.7	9.6	2.7	6.5	3.5	4.0	2.3
Black	8.7	6.0	7.8	2.2	7.6	4.1	6.6	2.1
Hispanic	6.4	3.0	11.5	2.2	9.2	3.2	4.3	2.0
Other	7.5	6.9	4.3	*	5.5	4.0	3.7	0.6
Adult Education[4]								
Less than high school	22.1	15.9	13.0	3.1	9.0	4.1	6.2	2.6
High school graduate	21.9	13.1	12.0	2.8	7.4	3.6	4.3	2.1
Some college	16.1	12.3	11.0	2.9	10.0	3.6	5.1	1.9
College graduate	7.4	5.2	5.4	1.8	3.1	1.9	2.2	1.0
Current Employment[5]								
Full-time	17.9	12.8	10.6	3.1	7.3	3.7	4.0	1.7
Part-time	13.1	10.4	13.3	2.7	8.5	4.4	6.6	2.0
Unemployed	26.5	17.6	16.5	4.9	13.3	9.2	10.4	7.2
Other	13.3	10.6	6.6	1.9	4.9	1.9	2.8	1.6
Marital Status[6]								
Married	16.1	10.6	6.7	1.4	4.0	1.6	2.0	1.1
Widowed	10.6	9.8	6.5	1.0	2.0	0.3	*	0.3
Divorced or separated	30.9	20.8	15.2	4.7	13.0	6.8	9.0	3.8
Never married	11.7	8.7	15.7	5.7	12.2	7.6	8.7	4.3

Table reads as follows: In 1994-1995, about 15.2% of men aged 12 and older reported heavy cigarette use in the past month.

Notes: * Low precision; no estimate reported. [1] Heavy cigarette use is defined as smoking one pack or more of cigarettes each day.

[2] Heavy alcohol use is defined as having five or more drinks per occasion on five or more days in the past month.

[3] Problem drug users are defined as persons who needed treatment for drug use in the past year. Persons who are defined as having a "need for drug treatment" are those who: are dependent on any illicit drug, using criteria similar to those of the DSM-IV; are injection drug users; are frequent drug users (daily marijuana use, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); used any heroin, or received treatment for drug use in the past year. [4] Data on adult education are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[5] Data on current employment are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

[6] Data on marital status are not applicable for respondents aged 12-17. Total refers to adults aged 18 and older.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.4 Relative Likelihood[1] of Any Illicit Drug Use, Psychotherapeutics Use and Problem Drug Use in the Past Year, and Heavy Alcohol Use in the Past Month, for Persons Aged 18 and Older, Controlling for Demographic Characteristics: 1994-1995

Explanatory and Control Variables	Past-Year Any Illicit Drug Use	Past-Year Psycho-therapeutics Use	Past-Month Heavy Alcohol Use	Past-Year Problem Drug Use
Male[2]	1.61†	1.16	4.20†	2.41†
Ages 18 - 25[3]	3.93†	2.41†	1.88†	2.05†
Ages 26 - 34[3]	2.70†	2.29†	1.57†	2.03†
Black[4]	0.90	0.47†	0.61†	1.01
Hispanic[4]	0.57†	0.50†	0.88	0.68†
Other race/ethnicity[4]	0.48†	0.28†	0.59	0.59
< High school degree[5]	1.33†	1.68†	2.57†	2.61†
High school graduate[5]	1.18†	1.65†	2.13†	1.79†
Some college[5]	1.21†	1.51†	1.79†	1.77†
Not employed[6]	0.69†	0.70†	0.69†	1.01
Not married[7]	2.41†	2.10†	2.38†	3.03†

Notes: [1] The relative likelihoods were estimated using logistic regression analyses. The relative likelihood or odds ratio for each explanatory or control variable measured the likelihood of specific drug use patterns in the past year for the subgroup, compared to a reference group. For example, the adjusted odds ratio of 1.61 for men aged 18 and older means that, after statistically controlling for the effects of age, race/ethnicity, education, employment, and marital status, the likelihood of using any illicit drug in the past year was 1.61 times as high among men as among women aged 18 and older.

[2] The reference group is "female."

[3] The reference group is "age 35 and older."

[4] The reference group is "white."

[5] The reference group is "college graduates."

[6] The reference group is "the employed."

[7] The reference group is "those who were married."

† Adjusted odds ratio is significantly different from 1.0 at $\alpha = .05$.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.5 Percentage Reporting Substance Use in the Past Year, for Persons Aged 18 and Older, by Gender, Race/Ethnicity, and Types of Substance: 1994-1995

	White		Black		Hispanic		Asian/Pacific Islander		American Indian	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Cigarettes	35.1	31.1	37.2	30.1	39.3	22.0	31.0	12.1	*	*
Alcohol	76.9	68.5	65.6	54.1	78.5	51.7	62.4	44.7	*	*
Marijuana	10.5	5.8	14.1	6.3	8.5	3.7	5.3	1.4	*	7.4
Illicit drug other than marijuana	5.9	4.3	7.2	2.9	6.0	2.8	3.0	0.7	*	9.9
Any illicit drug use	12.5	8.1	17.1	8.0	10.9	5.5	6.4	1.8	*	13.1

Table reads as follows: 35.1% of white males aged 18 and older reported using cigarettes in the past year.

Notes: * Low precision; no estimate reported.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.6 Percentage Reporting Substance Use in the Past Year, for Persons Aged 12-17, by Gender, Race/Ethnicity, and Types of Substance: 1994-1995

	White		Black		Hispanic		Asian/Pacific Islander		American Indian	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Cigarettes	29.9	29.3	15.1	13.2	21.9	17.8	11.1	9.0	*	*
Alcohol	38.5	39.3	27.0	26.5	33.9	31.2	20.7	16.3	*	*
Marijuana	13.9	13.1	12.7	9.2	14.0	11.7	5.3	*	*	*
Illicit drug other than marijuana	9.6	10.9	5.4	5.5	8.8	6.2	5.4	3.6	*	*
Any illicit drug use	17.9	17.6	16.0	13.3	17.7	14.3	6.6	7.8	*	*

Table reads as follows: 29.9% of white males aged 12-17 reported using cigarettes in the past year.

Notes: * Low precision; no estimate reported.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.7 Percentage of Women Aged 18 and Older Reporting Past-Year Cigarette Use and Past-Month Heavy Cigarette Use, by Marital Status, Controlling for Other Demographic Characteristics: 1994-1995

	Past-Year Cigarette Use			Past-Month Heavy Cigarette Use[1]		
	Married	Never Married	Divorced/ Separated	Married	Never Married	Divorced/ Separated
Age Groups (Years)						
18 - 25	34.3	39.5	66.9	9.6	8.1	24.5
26 - 34	29.9	36.7	55.1	11.5	11.1	21.7
35 - 49	26.7	40.2	49.6	12.4	18.9	24.8
50+	20.3	16.8	36.7	8.3	8.1	15.1
Race/Ethnicity						
White	26.5	41.1	49.6	12.1	13.4	24.8
Black	27.4	32.8	41.4	5.9	6.6	9.8
Hispanic	18.2	35.4	29.6	2.4	3.6	7.4
Other	17.2	25.5	47.2	6.1	3.6	31.4
Adult Education						
Less than high school	30.3	48.5	56.0	15.2	16.9	26.8
High school graduate	27.3	41.4	53.3	11.4	12.0	25.7
Some college	18.2	38.4	46.7	11.5	8.9	17.6
College graduate	17.2	22.4	22.5	4.8	5.6	8.5
Current Employment						
Full-time	27.9	39.2	47.4	10.4	12.2	20.6
Part-time	25.0	35.5	38.8	11.4	7.1	14.8
Unemployed	31.8	42.2	61.2	15.0	13.5	29.1
Other	22.8	33.7	45.1	10.0	8.6	22.0
Family Participated in Welfare Programs						
Yes	45.3	49.5	53.2	17.3	16.5	21.7
No	24.8	35.5	45.8	10.3	9.6	20.7
No. of Children <Age 18 Living With						
None	23.8	35.8	45.8	9.4	10.1	21.0
One	26.4	41.4	48.6	11.6	12.6	24.0
Two	27.8	39.4	46.3	11.8	10.4	17.3
Three and more	27.3	38.4	49.9	11.8	9.1	18.1

Table reads as follows: In 1994-1995, among women in the 18-25 age group, 34.3% of those who were married reported cigarette use in the past year.

Notes: [1] Heavy cigarette use is defined as smoking one pack or more of cigarettes each day in the past 30 days.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.8 Percentage of Women Aged 18 and Older Reporting Past-Year Alcohol Use and Past-Month Heavy Alcohol Use, by Marital Status, Controlling for Other Demographic Characteristics: 1994-1995

	Past-Year Alcohol Use			Past-Month Heavy Alcohol Use[1]		
	Married	Never Married	Divorced/ Separated	Married	Never Married	Divorced/ Separated
Age Groups (Years)						
18 - 25	66.9	76.5	74.3	1.8	8.3	6.6
26 - 34	72.9	76.8	79.6	2.0	5.6	5.7
35 - 49	72.1	67.4	74.9	1.6	3.9	6.3
50+	53.5	51.5	60.2	0.7	*	2.1
Race/Ethnicity						
White	68.8	80.3	74.7	1.3	8.1	4.8
Black	51.2	62.6	60.0	1.3	3.7	2.6
Hispanic	49.7	61.6	59.5	1.6	4.5	3.9
Other	49.3	55.9	63.6	*	*	*
Adult Education						
Less than high school	44.5	59.2	57.5	2.2	7.3	5.5
High school graduate	63.2	70.1	72.5	0.9	6.3	7.5
Some college	71.4	79.3	74.6	1.6	7.6	2.8
College graduate	77.2	81.7	74.2	1.2	4.7	0.7
Current Employment						
Full-time	73.9	79.4	78.7	1.6	6.3	4.8
Part-time	75.5	75.9	59.1	0.8	6.6	6.7
Unemployed	68.3	67.7	70.9	1.4	6.5	9.0
Other	51.8	60.9	55.1	1.3	6.5	2.5
Family Participated in Welfare Programs						
Yes	61.5	64.7	67.0	*	5.7	6.2
No	65.3	74.8	71.1	1.2	6.6	4.5
No. of Children <Age 18 Living With						
None	63.0	77.3	66.7	1.1	7.3	5.0
One	64.6	69.4	76.2	2.0	5.7	4.4
Two	72.0	66.8	77.6	1.5	5.0	3.8
Three and more	63.4	60.0	70.5	1.3	3.5	5.3

Table reads as follows: In 1994-1995, among women in the 18-25 age group, 66.9% of those who were married reported using alcohol in the past year.

Notes: * Low precision; no estimate reported.

[1] Heavy alcohol use is defined as having five or more drinks per occasion on five or more days in the past month.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.9 Percentage of Women Aged 18 and Older Reporting Any Illicit Drug Use and Problem Drug Use in the Past Year, by Marital Status, Controlling for Other Demographic Characteristics: 1994-1995

	Any Illicit Drug Use			Problem Drug Use[1]		
	Married	Never Married	Divorced/ Separated	Married	Never Married	Divorced/ Separated
Age Groups (Years)						
18 - 25	12.0	24.8	29.0	2.2	5.2	4.3
26 - 34	8.5	16.5	19.6	1.8	4.0	5.9
35 - 49	5.6	11.0	13.3	1.4	3.9	4.1
50+	0.4	0.5*	5.5	*	*	*
Race/Ethnicity						
White	5.1	22.2	13.3	1.1	5.1	4.5
Black	4.5	15.5	9.0	1.5	3.2	1.9
Hispanic	3.0	12.0	9.0	1.0	4.0	2.4
Other	1.2	8.6	21.9	*	*	*
Adult Education						
Less than high school	4.5	21.4	13.6	2.0	5.9	5.1
High school graduate	5.2	19.6	12.7	1.1	5.4	3.3
Some college	4.4	20.6	11.6	0.6	4.7	4.2
College graduate	4.6	14.7	11.7	0.7	1.4	3.1
Current Employment						
Full-time	5.8	18.0	12.0	0.9	3.8	2.0
Part-time	6.0	22.7	13.3	0.9	5.5	2.1
Unemployed	8.1	24.5	21.7	1.7	9.4	*
Other	2.9	16.7	10.3	1.2	3.0	6.4
Family Participated in Welfare Programs						
Yes	10.2	21.7	21.6	5.1	6.1	10.5
No	4.5	18.6	10.9	0.9	4.0	2.7
No. of Children <Age 18 Living With						
None	2.4	20.4	10.4	0.7	4.3	3.2
One	6.9	16.8	15.3	1.4	4.3	4.4
Two	6.9	15.4	12.1	1.4	4.6	4.3
Three and more	7.7	18.5	17.1	1.6	4.4	5.2

Table reads as follows: In 1994-1995, among women in the 18-25 age group, 12% of those who were married reported using *any* illicit drug in the past year.

Notes: * Low precision; no estimate reported.

[1] Problem drug users are defined as persons who needed treatment for drug use in the past year. Persons who are defined as having a "need for drug treatment" are those who: are dependent on any illicit drug, using criteria similar to those of the DSM-IV; are injection drug users; are frequent drug users (daily marijuana use, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); used any heroin, or received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 3.10 Relative Likelihood[1] of Any Illicit Drug Use and Problem Drug Use in the Past Year for Women Aged 18 and Older, Controlling for Demographic Characteristics: 1994-1995

Explanatory and Control Variables	Any Illicit Drug Use	Problem Drug Use
Divorced/Separated[2]	3.10†	2.66†
Never Married[2]	2.64†	2.56†
Ages 18 - 25[3]	3.99†	0.98
Ages 26 - 34[3]	2.56†	1.20
Black[4]	0.62†	0.58†
Hispanic[4]	0.42†	0.34†
Other race/ethnicity[4]	0.44†	0.24†
< High school degree[5]	1.15	2.80†
High school graduate[5]	1.13	1.79
Some college[5]	1.00	1.11
Family on welfare[6]	1.53†	1.92†
Living with 1 child[7]	1.20	0.94
Living with 2+ children[7]	1.20	0.96

Notes: [1] The relative likelihoods were estimated using logistic regression analyses. The relative likelihood or odds ratio for each explanatory or control variable measured the likelihood of any illicit drug use and problem drug use in the past year for the subgroup, compared to a reference group. For example, the adjusted odds ratio of 3.10 for women who were divorced means that, after statistically controlling for the effects of never having been married, race/ethnicity, education, family income, family on welfare, and number of children living with the respondents, the likelihood of using any illicit drug in the past year was 3.10 times as high among women who were divorced as among women who were married.

[2] The reference group is "those who were married."

[3] The reference group is "35 and older."

[4] The reference group is "white."

[5] The reference group is "college graduates."

[6] The reference group is "those who did not have a family member on welfare in the household."

[7] The reference group is "those who live with no children."

† Adjusted odds ratio is significantly different from 1.0 at $\alpha = .05$.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

4. CORRELATES OF SUBSTANCE USE AND ABUSE

Using the most current (1994 and 1995) NHSDA data, this chapter identifies the demographic, psychosocial, and behavioral correlates of alcohol, cigarette, and illicit drug use and abuse among adult women and female adolescents.

INTRODUCTION: Several national studies have provided a demographic profile of adult substance users and abusers (Flewelling et al., 1993; Regier et al., 1993; Schoenbach, 1991; SAMHSA, 1996; Warner et al., 1995). Previous research on adults has also documented the co-occurrence of substance use and mental disorders (Helzer and Pryzbeck, 1988; Himle and Hill, 1991; Kessler et al., 1994; Regier et al., 1990; SAMHSA, 1996b; Wittchen et al., 1994; Warner et al., 1995). These studies have suggested consistently that females and males show different rates of substance use and abuse and mental disorders, different rates of initiation of alcohol and drug use, and possibly different rates of comorbid mental disorders. Yet (with the exception of SAMHSA, 1996b) they have not reported these rates separately for males and females.

Studies of adolescents have also identified a number of demographic and psychosocial correlates of substance use and abuse (e.g., Hanson and O'Malley, 1996; Hawkins, Catalano, and Miller, 1992; Perry and Staufacker, 1996; Windle, Shope, and Bukstein, 1996). Several of these studies have shown that adolescent girls differ from adolescent boys in terms of risk factors for substance use and abuse: girls tend to be more sensitive to family influences and boys tend to be affected more by school factors (Kandel, 1985; Krohn and Massey, 1980; Johnson, Hoffmann, and Gerstein, 1996; Needle, Su, and Doherty, 1990; Rosenbaum, 1987). Additionally, research has found that, among adolescent substance abusers, females are more likely to suffer from major depression while males are more likely to manifest conduct disorders (Bukstein et al., 1992; Loeber et al., 1994). However, these studies were usually based on clinical or high-risk community samples, and so their findings cannot be generalized to the national population. Therefore, NHSDA data are used to explore the following questions.

REFERENCE TO TABLES

TABLES AT END OF CHAPTER

4.1 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 18 and Older, by Types of Substance, Demographic Characteristics, and Mental Syndromes: 1994-1995. Pages 4-16, 4-17

4.2 Percentage of Population Reporting Heavy Cigarette Use and Heavy Alcohol Use in the Past Month, and Problem Drug Use in the Past Year, for Males and Females Aged 18 and Older, by Demographic Characteristics and Mental Syndromes: 1994-1995. Pages 4-18, 4-19

4.3 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 12-17, by Types of Substance Use, Demographic Characteristics, and Psychosocial Correlates: 1994-1995. Pages 4-20, 4-21

4.4 Percentage of Population Reporting Problem Drug Use in the Past Year for Males and Females Aged 12-17, by Demographic Characteristics and Psychosocial Correlates: 1994-1995. Page 4-22

4.5 Relative Likelihood of Problem Drug Use and Any Illicit Drug Use in the Past Year, for Males and Females Aged 18 and Older, Controlling for Demographic Characteristics and Mental Syndromes: 1994-1995. Page 4-23

4.6 Relative Likelihood of Any Illicit Drug Use and Any Alcohol Use in the Past Year, for Males and Females Aged 12-17, Controlling for Demographic Characteristics and Psychosocial Correlates: 1994-1995. Page 4-24

RESEARCH QUESTIONS:

- ❒ **What are the correlates of substance use among adult women and adolescent females aged 12-17? To what extent do they differ from the correlates of substance use among adult men and adolescent males? (*Pages 4-5 through 4-10*)**

- ❒ **Do correlates of substance use among females vary with types of substance, and level of use? (*Pages 4-11 through 4-13*)**

MEASURES:

The data presented in this chapter are based on information collected in the 1994 and 1995 NHSDAs. We have created several measures of alcohol, cigarette, and illicit drug use. The variables are:

- ***Any* illicit drug use** includes marijuana, cocaine (including crack), inhalants, hallucinogens, heroin, and nonmedical use of psychotherapeutics.

- **Heavy cigarette use** is defined as smoking one pack or more of cigarettes each day in the past 30 days.

- **Heavy alcohol use** is defined as consuming five or more drinks per occasion on 5 or more days in the previous 30 days.

- **Problem drug use** is defined, in this chapter and chapters 3 and 8, as dependence on *any* illicit drug, using criteria similar to those of the DSM-IV[1] (American Psychiatric Association, 1994); frequent drug use (i.e., using marijuana daily or more; or using cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more); using *any* heroin in the past year; injection drug use; or receiving treatment for drug use within the 12 months preceding the interview.

Continued

[1] It is important to note that questions used to estimate drug dependence were changed slightly from 1994 to 1995. The questions used to estimate drug dependence in 1994 were designed to approximate 5 of the 7 DSM-IV criteria, while the questions used to estimate drug dependence in 1995 were developed to approximate 6 of the 7 DSM-IV criteria. Respondents were defined as dependent for a specific drug in 1994 if they indicated they had used that drug in the past year and met 3 of the 5 DSM-IV criteria covered by the 1994 dependence questions. In 1995, respondents were classified as dependent for a specific drug if they indicated they had used that drug in the past year and met 3 of the 6 DSM-IV criteria covered by the 1995 dependence questions. The DSM-IV-based estimates of drug dependence for the 1994 data are comparable to those for the 1995 data (Epstein and Gfroerer, 1997).

MEASURES (Continued):

MEASURES OF MENTAL DISORDERS FOR ADULTS AGED 18 AND OLDER include any of the following in the past year: major depressive episodes, panic attack, generalized anxiety disorder, and agoraphobia. These measures are created using the NHSDA mental health screening questions, which consist of a subset of questions developed for the National Comorbidity Survey. (See SAMHSA, 1996b, Appendix 4, and Appendix C of this report for a more detailed discussion of the mental health measures.)

MEASURES OF PSYCHOSOCIAL PROBLEMS FOR ADOLESCENTS AGED 12-17: we compute two general psychosocial problem scores, the emotional problem score and the behavioral problem score, based on items from the Youth Self-Report (Achenbach, 1991).

- **The emotional problem score** covers anxiety or depression, withdrawal, and recurrent somatic complaints experienced in the past year, and

- **The behavioral problem score** covers problems of aggressiveness and delinquency in the past year. (See Appendix C for a detailed discussion of how the scores were computed.)

DEMOGRAPHIC, PSYCHOSOCIAL AND BEHAVIORAL MEASURES:

We examine the following demographic, psychosocial, and behavioral correlates of substance use and abuse **for adults aged 18 and older**: "detailed" ages (i.e., data broken down into ages 18-25 and 26-34), race/ethnicity, number of children under age 18 living with the respondent, household member's receiving welfare assistance, education, employment, marital status, age of initiation for alcohol or drug use, and mental syndromes. **For adolescents aged 12-17**, we explore the associations between substance use or abuse and demographic and psychosocial characteristics, such as detailed age (ages 12-14 and 15-17), race/ethnicity, family relocation in the past five years, family member in the same household receiving welfare assistance, family structure, and school dropout.

❒ What are the correlates of substance use among adult women and adolescent females aged 12-17? To what extent do they differ from the correlates of substance use among adult men and adolescent males?

Overall, various demographic, psychosocial, and behavioral characteristics were associated with substance use and abuse in a similar way for women and men, but certain correlates deviated importantly from this pattern.

Adult Cigarette Use in Past Year

Similar to the results for men, women with the following characteristics were more likely to report past-year cigarette use:

- young age (18-25 years),
- lower socioeconomic status (e.g., less than a high school degree, unemployment, family member in the same household receiving welfare assistance),
- divorced or separated marital status,
- early age of substance use initiation (i.e., age 15 or younger), and
- the presence of one or more of the four measured mental syndromes (i.e., major depressive episode, generalized anxiety disorder, agoraphobia, and panic attacks—see Table 4.1).

However, race/ethnicity was associated with higher rate of past-year cigarette use differently for women and men. White and black women had higher rates of past-year cigarette use than Hispanic women. In contrast, a greater proportion of Hispanic men reported past-year cigarette use than men from other racial/ethnic groups.

Adult Alcohol Use in Past Year

Among both women and men, the following characteristics were associated with past-year alcohol use: younger age (18-25 and 26-34), completing college, full-time employment, being unmarried, early use of alcohol or drugs (at age 15 or younger), and having generalized anxiety disorder or panic attacks.

What are the correlates of substance use among adult women and adolescent females aged 12-17? To what extent do they differ from the correlates of substance use among adult men and adolescent males? (Continued)

Among adults, white and Hispanic men had similar rates of past-year alcohol use, but white women reported higher rates of alcohol use in the past year than Hispanic women.

Men who reported at least one major depressive episode or panic attack in the past year had similar rates of past-year alcohol use as did men who did not report these mental syndromes. In contrast, among women, a greater proportion of those who had had one or more major depressive episodes or panic attacks reported past-year alcohol use compared to women free from these mental syndromes.

Adult Marijuana Use in Past Year

Among both men and women, the highest prevalence of past-year marijuana use was found among those aged 18-25, blacks, those with some college education, those with lower economic status (i.e., unemployed or family member in the household receiving welfare assistance), those who had never married, those who had initiated use of alcohol or drugs at age 15 or younger, and those with a mental syndrome, that is, major depressive episode, generalized anxiety disorder, agoraphobia, or panic attacks (see Table 4.1).

Adult Any Illicit Drug Use in Past Year

Among both men and women, rates of past-year illicit drug use were higher among subgroups with the following characteristics: younger age (18-25 and 26-34), family member in the same household receiving welfare assistance, never married or separated/divorced, early use of alcohol or drugs (at age 15 or younger), and having experienced one or more of the four specified mental syndromes (see Table 4.1). However, after statistically controlling for the effects of other correlates, some of these correlates were stronger for adult women than for adult men. This is true for household member's receipt of welfare assistance and first use of alcohol or drugs at an early age. In contrast, being black was more strongly correlated with past-year illicit drug use among men compared to women. (See Table 4.5.)

Adult Heavy Cigarette Use in Past Month

Heavy cigarette use in the past month was more likely to be reported by both women and men who were in the middle age group (35-49 years of age), were white, were divorced or separated, had a lower educational level, were unemployed, had family members in the same household who received welfare assistance, had initiated alcohol or drug use at age 15 or younger, and had exhibited one or more of the four measured mental syndromes in the past year (see Table 4.2).

However, major depressive episodes and agoraphobia were found to be stronger correlates of *heavy* cigarette use for women than for men:

- Women who had had at least one major depressive episode in the past year were about twice as likely as those who had had no episodes to report *heavy* cigarette use in the past month: 20% versus 10%. And adult women who had had agoraphobia in the past year were about 2.1 times as likely as adult women who did not report agoraphobia to report past-month *heavy* cigarette use: 23% versus 11%.
- In comparison, men who had had at least one major depressive episode in the past year were only about 1.5 times as likely as men who had had no episodes to report past-month *heavy* cigarette use (23% versus 15%). And men who had had agoraphobia in the past year were about 1.3 times as likely as men who had had no agoraphobia to report *heavy* cigarette use in the past month (20% versus 16%).

Adult Heavy Alcohol Use in Past Month

A higher prevalence of *heavy* alcohol use in the past month was found among both adult men and women in the following subgroups: those aged 18-25, those with less than a college education, the unemployed, those who had never married or were separated or divorced, those who had first used alcohol or drugs at an early age (15 or younger), and those who had had agoraphobia or panic attacks in the past year (see Table 4.2).

For men, the prevalence of *heavy* alcohol use in the past month was higher among Hispanics than among whites or blacks. But for women there were no differences in the prevalence of past-month *heavy* alcohol use among whites, blacks, and Hispanics.

What are the correlates of substance use among adult women and adolescent females aged 12-17? To what extent do they differ from the correlates of substance use among adult men and adolescent males? (Continued)

Adult Problem Drug Use in Past Year

Based on the results of bivariate data analysis, past-year problem drug use was more likely to be reported by both men and women who had the following characteristics: aged 18-25, less than high school degree, lower economic status (i.e., unemployment and family member in the same household receiving welfare assistance), never married or separated/divorced, initiation of alcohol or drug use at age 15 or younger, and the presence of one or more of the four measured mental syndromes in the past year (i.e., major depressive episode, generalized anxiety disorder, agoraphobia, and panic attacks). Adults, in particular women, who had never married or were separated or divorced, and those with mental syndromes, in particular generalized anxiety disorder and panic attack, were more likely to report past-year problem drug use. (See Table 4.2.)

After statistically controlling for other correlates, the most important correlate of problem drug use among adult women was their initiation of alcohol or drug use at an early age. Adult women who had initiated substance use at age 15 or younger were 18 times as likely to report problem drug use as adult women who had initiated substance use at age 20 or older. Other significant correlates of problem drug use among adult women include low educational level, being unmarried, and having one or more of the four measured mental syndromes. For adult men, significant correlates of problem drug use were young age, being black, low educational level, being unmarried, early initiation of substance use, and presence of one or more of the four measured mental syndromes. (See Table 4.5.)

Adolescent Cigarette Use in Past Year

Cigarette use in the past year was generally more likely to be reported by female and male adolescents in the following subgroups: whites, those aged 15-17, those living in a family structure other than a two-biological-parent family, and those reporting that their family had moved two or more times in the past five years (see Table 4.3).

Cigarette use was also proportionally higher among both female and male adolescents who reported emotional and behavioral problems and who had a family member in the same household receiving welfare assistance. However, among males, a higher percentage of adolescents who dropped out of high school reported past-year cigarette use than their counterparts who did not drop out, but female adolescents who dropped out reported about the same rate of cigarette use in the past year as their counterparts who stayed in school.

Adolescent Illicit Drug Use in Past Year

The prevalence of past-year illicit drug was relatively higher among both female and male adolescents who had the following characteristics: age 15-17, living in a family structure other than a two-biological-parent family, family relocation two or more times in the past five years, and having emotional or behavioral problems. Having a family member in the same household receiving welfare was found to be a stronger correlate of adolescent females' illicit drug use than of adolescent males' illicit drug use, whereas dropping out of school was a stronger correlate of past-year illicit drug use for adolescent males than for adolescent females (see Table 4.3.)

What are the correlates of substance use among adult women and adolescent females aged 12-17? To what extent do they differ from the correlates of substance use among adult men and adolescent males? (Continued)

After statistically adjusting for various correlates:

- Adolescent females who were aged 15-17 were about 3.3 times as likely as adolescent females who were aged 12-14 to report *any* illicit drug use in the past year.
- Adolescent females not living in two-biological-parent families were about 1.5 times as likely as those living in two-biological-parent families to report past-year illicit drug use.
- Adolescent females whose families had moved in the past five years were approximately 1.6 times as likely to report past-year illicit drug use as their female counterparts whose families had not moved.
- Adolescent females who had behavioral problems were about 5.5 times as likely to report past-year illicit drug use as adolescent females who had no behavioral problems. (See Table 4.6.)

Adolescent Problem Drug Use in Past Year

Among adolescent males and females, the prevalence of problem drug use was higher in the following subgroups: those aged 15-17, those who lived in a family structure other than the two-biological-parent family, those whose family had moved in the past five years, and those who reported emotional and/or behavioral problems. For girls, past-year problem drug use was higher among whites than among blacks or Hispanics, but for boys past-year problem drug use did not differ significantly among various racial/ethnic groups. Moreover, dropping out of school and having a family member in the same household receiving welfare assistance were associated with adolescent males', but not adolescent females', problem drug use (see Table 4.4.)

❒ Do correlates of substance use among females vary with types of substance and level of use?

Cigarette Use Compared to Drug Use among Adults

In general, among adult women, the correlates of past-year use of marijuana and *any* illicit drug were very similar to those of past-year cigarette use: young age, never-married or separated/divorced status, unemployment, family's participation in welfare programs, early use of alcohol or drugs, and the presence of *any* of the mental syndromes. However, rates of cigarette use among adult females were higher among those with less than a high school degree and those who were white or black, while rates of marijuana use among adult females were higher among those with some college education and those who were black.

Alcohol Use Compared to Other Substance Use among Adults

Among women, the correlates of past-year alcohol use were substantially different from the correlates of past-year use of cigarettes, marijuana, and *any* illicit drug. Specifically, college graduation, full-time employment, living with two or more children under age 18, and white or Hispanic race/ethnicity were associated with a higher prevalence of past-year alcohol use. At the same time, being a young adult (aged 18-25 or 26-34), never-married status, and having one of the four specified mental syndromes in the past year were found to be associated with a higher prevalence of past-year use of alcohol, cigarettes, marijuana, or *any* illicit drug.

Heavy Cigarette Use Compared to Moderate Smoking among Adults

In general, correlates of female *heavy* cigarette use were similar to correlates of female cigarette use: the rate of use was higher among those with relatively low levels of education, the unemployed, those who were divorced or separated, those with a family member in the same household receiving welfare assistance, those who had initiated use of alcohol or drugs at a young age (i.e., age 15 or younger), and those who experienced *any* of the specified mental syndromes. Nonetheless, a higher prevalence of past-month *heavy* cigarette use was reported by whites and those age 26-49, while a higher prevalence of *any* cigarette use in the past year was reported by whites and blacks, and by those in the 18-25 age group.

Do correlates of substance use among females vary with types of substance and level of use? (Continued)

Heavy Alcohol Use Compared to Moderate Alcohol Use among Adults

Correlates of *heavy* alcohol use were substantially different from those of *any* alcohol use for adult women:

- Being a young adult (18-25 years of age), having less than a high school degree, unemployment, and having a family member in the same household receiving welfare assistance were associated with higher rates of past-month *heavy* alcohol use. In contrast, college graduation, full-time employment, living with two or more children under age 18, and white or Hispanic race/ethnicity were associated with higher rates of *any* past-year alcohol use.

- Further, mental syndromes appeared to have stronger associations with *heavy* alcohol use than with *any* alcohol use.

Problem Drug Use Compared to Any Illicit Drug Use among Adults

Among adult women, correlates of problem drug use were similar to correlates of *any* illicit drug use. An exception to this was education. While rates of *any* illicit drug use were similar across various educational levels, rates of problem drug use tended to decrease with increasing educational attainment among adult women.

Problem Drug Use Compared to Alcohol Use among Adolescents

Among female adolescents, correlates of problem drug use were very similar to those of *any* alcohol use. Older age (i.e., age 15-17), white race/ethnicity, family structure other than a two-biological-parent family, and emotional and behavioral problems were associated with higher rates of problem drug use and *any* alcohol use. Emotional and behavioral problems, however, were more strongly associated with past-year problem drug use than with *any* alcohol use in the past year among adolescent females (see Table 4.3).

Problem Drug Use Compared to Illicit Drug Use among Adolescents

Among adolescent females, correlates of past-year illicit drug use paralleled those of past-year problem drug use. However, having emotional or behavioral problems was found to be a stronger correlate of past-year problem drug use than of *any* past-year illicit drug use.

Illicit Drug Use Compared to Alcohol Use among Adolescents

Older age (i.e., ages 15-17), a family structure other than a two-biological-parent family, and the presence of behavioral problems were identified as the common correlates of both past-year illicit drug use and alcohol use among adolescents, after statistically controlling for other correlates (see Table 4.6). Specifically,

- Relative to adolescent females aged 12-14, adolescent females aged 15 to 17 were approximately 3.3 times as likely to have used *any* illicit drug in the past year, and 4.4 times as likely to report *any* past-year alcohol use.

- Relative to adolescent females who had no behavioral problems, adolescent females with behavioral problems were about 5.5 times as likely to report past-year illicit drug use, and 4.9 times as likely to have used alcohol in the past year.

- Relative to adolescent females from two-biological-parent families, adolescent females from other than two-biological-parent families were about 1.4-1.5 times as likely to have used alcohol or *any* illicit drug in the past year.

Nevertheless, among adolescent females, some correlates of past-year illicit drug use differed from those of past-year alcohol use. For example, family relocation in the past five years was significantly associated with past-year illicit drug use, but not with past-year alcohol use. The presence of emotional problems was significantly associated with past-year alcohol use but not with past-year illicit drug use.

CONCLUSIONS

Correlates of the use of alcohol, cigarettes, and illicit drugs in the past year were generally similar for adult men and women.

Among adult women most of the correlates of past-year alcohol use were substantially different from those of past-year cigarette and illicit drug use. Higher rates of past-year cigarette and illicit drug use were associated with lower socioeconomic status (such as unemployment, and family member in the same household receiving welfare assistance), never-married or divorced/separated marital status, presence of *any* specified mental syndromes, and early use of alcohol or drugs. Higher rates of past-year alcohol use were found among those with a college education, those employed full-time and the unmarried.

Among male and female adolescents, correlates of past-year alcohol, cigarette, and illicit drug use included older age (i.e., ages 15-17), not living with two biological parents, family receipt of welfare assistance, and emotional or behavioral problems. However, dropping out of school was associated with alcohol, cigarette, and illicit drug use among adolescent males but not among adolescent females. Regardless of gender, the correlates of substance use among adolescents aged 12-17 generally did not vary much by type of substance used or level of substance involvement.

TABLES

Table 4.1 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 18 and Older, by Types of Substance, Demographic Characteristics, and Mental Syndromes: 1994-1995

	Cigarette Use		Alcohol Use		Marijuana Use		Any Illicit Drug Use	
	Males	Females	Males	Females	Males	Females	Males	Females
Total	35.4	30.0	74.9	65.0	10.2	5.9	12.4	7.9
Age Groups (Years)								
18 - 25	44.4	39.3	81.4	73.4	25.4	18.3	28.7	21.5
26 - 34	40.1	34.4	81.3	74.6	14.7	8.7	17.8	11.7
35 - 49	39.3	32.4	78.1	72.2	9.2	4.8	11.7	7.6
50+	24.6	22.3	65.0	50.8	1.4	0.5	2.2	1.0
Race/Ethnicity								
White	35.1	31.1	76.6	68.8	10.3	6.1	12.4	8.2
Black	36.2	30.9	65.5	54.1	13.2	7.0	16.3	8.6
Hispanic	38.5	22.8	77.4	52.9	8.3	3.9	10.9	5.6
Other	32.1	21.4	59.1	50.0	6.3	3.4	7.4	4.8
Adult Education								
Less than high school	44.0	34.8	63.8	45.4	10.1	5.9	12.7	7.5
High school graduate	42.9	32.9	72.8	64.0	10.1	5.6	12.3	8.3
Some college	35.6	32.7	78.7	71.8	13.4	6.5	16.0	8.4
College graduate	20.1	17.7	82.5	77.1	7.9	5.5	9.6	7.2
Current Employment								
Full-time	36.6	33.7	80.2	75.2	10.7	7.1	13.0	9.3
Part-time	33.2	28.6	78.5	72.5	15.3	7.7	17.9	10.2
Unemployed	54.8	41.9	78.9	68.6	22.6	12.2	26.4	16.7
Other	29.3	25.4	59.1	50.5	4.6	3.1	6.1	4.6
Marital Status								
Married	30.6	25.5	72.6	65.1	5.3	2.9	6.7	4.7
Widowed	22.8	21.9	57.8	42.1	1.3	0.5	4.1	0.9
Divorced or separated	54.2	46.8	83.1	70.6	15.1	9.4	18.9	12.4
Never married	42.5	37.4	80.1	73.4	22.8	16.2	26.4	19.0

Table reads as follows: Approximately 44.4% of males aged 18-25 reported cigarette use in the past year.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.1 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 18 and Older by Types of Substance, Demographic Characteristics, and Mental Syndromes: 1994-1995

(Continued)	Cigarette Use		Alcohol Use		Marijuana Use		Any Illicit Drug Use	
	Males	Females	Males	Females	Males	Females	Males	Females
Family on Welfare								
Yes	58.3	48.7	75.0	62.6	15.7	13.3	20.2	17.3
No	34.6	28.7	72.9	65.1	10.0	5.3	12.2	7.3
No. of Children Living with								
0	33.5	28.5	74.3	62.8	10.4	5.5	12.7	6.8
1	38.7	32.7	75.9	66.7	10.8	7.0	13.0	9.9
2	36.9	31.5	77.6	71.5	8.8	5.9	10.9	8.5
3 or more	40.7	31.9	73.4	63.5	10.2	6.3	12.4	10.4
Age of Initiation for Alcohol or Drug Use (Years)								
15 or younger	43.8	45.2	85.9	83.5	19.7	18.3	23.5	24.2
16 -19	33.4	32.7	81.3	79.4	7.6	5.2	9.2	6.9
20 - 25	31.7	25.6	70.2	70.0	2.0	2.3	3.6	2.1
26+	33.8	24.5	69.7	53.8	4.0	0.2	4.1	1.3
Major Depressive Episode								
Yes	49.6	45.7	74.5	69.6	17.3	11.3	22.5	16.0
No	34.5	28.6	75.0	64.5	9.8	5.4	11.8	7.2
Generalized Anxiety Disorder								
Yes	55.9	48.2	80.3	73.6	18.2	11.3	27.1	16.9
No	35.1	29.6	74.9	64.8	10.1	5.4	12.2	7.7
Agoraphobia								
Yes	41.3	47.2	62.8	72.0	20.0	9.5	23.3	11.9
No	35.3	29.6	75.1	64.8	10.1	5.8	12.3	7.8
Panic Attacks								
Yes	46.0	52.3	80.6	77.1	23.4	17.0	27.9	24.1
No	35.2	29.3	74.8	64.6	10.0	5.3	12.1	7.4

Table reads as follows: Approximately 58.3% of males aged 18 and older who had a family member in the same household receiving welfare assistance reported cigarette use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.2 Percentage of Population Reporting Heavy Cigarette Use and Heavy Alcohol Use in the Past Month, and Problem Drug Use in the Past Year, for Males and Females Aged 18 and Older, by Demographic Characteristics and Mental Syndromes: 1994-1995

	Past-Month Heavy Cigarette Use[1]		Past-Month Heavy Alcohol Use[2]		Past-Year Problem Drug Use[3]	
	Males	Females	Males	Females	Males	Females
Age Groups (Years)						
18 - 25	11.1	9.1	18.2	6.2	8.9	4.3
26 - 34	17.0	12.5	12.3	3.2	5.6	2.8
35 - 49	21.3	15.2	9.0	2.6	4.1	2.1
50+	14.4	9.2	5.3	0.9	1.5	0.4
Race/Ethnicity						
White	18.0	12.8	9.7	2.6	4.0	2.0
Black	9.1	6.2	7.9	2.1	7.1	2.0
Hispanic	6.6	3.1	11.4	2.2	4.1	1.7
Other	7.7	7.1	4.1	3.0	3.7	0.4
Adult Education						
Less than high school	21.7	15.7	12.5	3.1	6.2	2.6
High school graduate	21.6	12.9	11.5	2.7	4.3	2.1
Some college	15.9	12.0	10.8	2.9	5.1	1.9
College graduate	7.4	5.2	5.3	1.8	2.2	1.0
Current Employment						
Full-time	17.7	12.6	10.2	3.0	4.0	1.7
Part-time	13.0	10.3	13.0	2.7	6.6	2.0
Unemployed	26.2	17.9	15.7	4.7	10.4	7.2
Other	13.2	10.4	6.4	1.9	2.8	1.6
Marital Status						
Married	16.0	10.4	6.4	1.3	2.0	1.1
Widowed	10.3	9.7	6.4	1.0	*	0.3
Divorced or separated	30.6	20.6	14.7	4.5	9.0	3.8
Never married	12.3	9.1	16.0	5.8	8.7	4.3

Table reads as follows: About 11.1% of males in the 18-25 age group reported heavy cigarette use in the past month.

Notes: [1] Heavy cigarette use is defined as smoking one pack or more of cigarettes each day in the past month.

[2] Heavy alcohol use is defined as consuming five or more drinks per occasion on five or more days in the past month.

[3] Problem drug users are defined as individuals who needed treatment for drug use. Respondents who are defined as having a "need for drug treatment" are those who were dependent on illicit drugs in the past year; were frequent drug users (used marijuana daily or more; or used psychotherapeutics, hallucinogens, inhalants, or cocaine weekly or more); were injection drug users in the past year; used heroin in the past year; or received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.2 Percentage of Population Reporting Heavy Alcohol Use and Heavy Cigarette Use, and Problem Drug Use in the Past Year for Males and Females Aged 18 and Older, by Demographic Characteristics and Mental Syndromes: 1994-1995

(Continued)	Past-Month Heavy Cigarette Use[1]		Past-Month Heavy Alcohol Use[2]		Past-Year Problem Drug Use[3]	
	Males	Females	Males	Females	Males	Females
Family on Welfare						
Yes	22.4	16.4	11.3	4.9	10.4	6.7
No	15.4	10.6	9.3	2.4	4.1	1.6
No. of Children Living with						
None	16.0	10.7	10.6	2.7	4.6	1.6
One	14.8	12.3	8.5	2.9	3.7	2.4
Two	14.9	11.0	7.0	2.1	3.2	2.1
Three or more	15.9	10.2	8.1	1.9	4.6	2.5
Age of Initiation for Alcohol or Drug Use						
15 or younger	20.1	17.0	15.4	6.9	8.9	6.8
16-19	16.1	11.9	8.9	2.4	2.6	1.3
20-25	13.6	9.4	4.5	1.2	0.9	0.4
26+	*	13.0	0.4	0.7	0.1	0.1
Major Depressive Episode						
Yes	23.3	20.0	12.0	3.4	9.9	6.1
No	15.1	10.2	9.3	2.5	3.9	1.5
Generalized Anxiety Disorder						
Yes	28.3	21.0	12.4	4.2	14.8	8.2
No	15.4	10.7	9.4	2.5	4.1	1.8
Agoraphobia						
Yes	20.1	22.8	16.4	5.3	12.5	4.9
No	15.6	10.7	9.3	2.5	4.2	1.8
Panic Attack						
Yes	26.1	22.3	13.8	7.5	16.2	10.0
No	15.4	10.6	9.3	2.4	4.1	1.7

Notes: [1] Heavy cigarette use is defined as smoking each day one pack or more of cigarettes in the past month.
[2] Heavy alcohol use is defined as consuming five or more drinks per occasion on five or more days in the past month.
[3] Problem drug users are defined as individuals who needed treatment for drug use. Respondents who are defined as having a "need for drug treatment" are those who were dependent on illicit drugs in the past year; were frequent drug users (used marijuana daily or more; or used psychotherapeutics, hallucinogens, inhalants, or cocaine weekly or more); were injection drug users in the past year; used heroin in the past year; or received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.3 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 12-17, by Types of Substance Use, Demographic Characteristics, and Psychosocial Correlates: 1994-1995

	Cigarette Use		Alcohol Use		Marijuana Use		Any Illicit Drug Use	
	Males	Females	Males	Females	Males	Females	Males	Females
Age Groups (Years)								
12 - 14	16.2	14.2	19.6	17.5	4.8	3.6	8.6	7.5
15 - 17	36.2	36.6	53.5	53.0	24.8	20.9	27.0	26.3
Race/Ethnicity								
White	28.7	30.0	38.8	39.1	15.0	13.4	17.7	18.9
Black	16.1	13.5	24.6	25.5	13.1	8.6	16.5	12.2
Hispanic	19.8	16.8	32.8	32.0	13.6	11.0	17.7	14.0
Other	21.5	15.2	22.1	13.6	2.9	6.4	7.7	7.7
Family Type								
Two-biological-parent family	23.8	21.0	34.1	32.8	10.9	9.5	14.4	13.5
Other[1]	31.3	31.2	39.1	40.2	18.3	16.8	22.8	21.0
No. of Times Family Moved in the Past Five Years								
None	26.2	29.4	39.8	31.9	15.0	12.7	18.9	16.8
Once	25.4	24.5	34.8	35.4	14.0	12.0	16.9	16.7
Twice or more	46.3	46.0	51.0	51.2	28.8	34.4	34.9	35.8
School Dropout								
Yes	30.5	27.8	41.9	36.4	17.1	13.3	24.3	17.9
No	24.7	24.7	34.3	34.6	13.6	11.8	16.0	16.5
Family on Welfare								
Yes	28.9	31.1	29.3	32.9	12.4	16.4	18.3	21.6
No	25.1	24.4	36.1	35.2	14.3	11.5	17.0	16.1

Table reads as follows: About 16.2% of males aged 12-17 reported using cigarettes in the past year.
Notes: [1] This includes single-parent families, step-parent families, foster families, and living with relatives.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.3 Percentage of Population Reporting Substance Use in the Past Year for Males and Females Aged 12-17, by Types of Substance Use, Demographic Characteristics, and Psychosocial Correlates: 1994-1995

(Continued)	Cigarette Use		Alcohol Use		Marijuana Use		Any Illicit Drug Use	
	Males	Females	Males	Females	Males	Females	Males	Females
Emotional Problems[2]								
Yes	31.8	42.3	43.3	45.7	19.7	18.5	27.7	29.4
No	24.6	22.4	34.3	33.2	13.3	11.0	15.6	14.7
Behavioral Problems[3]								
Yes	46.7	49.4	58.0	59.3	30.9	27.5	39.2	37.5
No	21.5	20.7	31.1	30.5	10.9	9.3	13.0	12.9

Notes: [2] Emotional problems include the following inner emotional problems: anxiety/depression, withdrawal, and recurrent somatic complaints. (See the description of the emotional problems score in the *Measures* section of this chapter and in Appendix B.)
[3] Behavioral problems include aggressiveness and delinquency. (See the description of the behavioral problems score in the *Measures* section of this chapter and Appendix B.)
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 995.

Table 4.4 Percentage of Population Reporting Problem Drug Use[1] in the Past Year for Males and Females Aged 12-17, by Demographic Characteristics and Psychosocial Correlates: 1994 -1995

	Problem Drug Use	
	Males	Females
Total	4.4	4.7
Age Group (Years)		
12-14	2.6	2.9
15-17	6.3	6.7
Race/Ethnicity		
White	4.4	5.5
Black	3.6	3.2
Hispanic	5.6	3.5
Family Structure		
Two-biological-parent family	3.4	3.9
Other[2]	6.2	5.9
No. of Times Family Moved in the Past Five Years		
None	7.5	7.3
Once or more	3.8	4.2
School Dropout		
Yes	7.3	5.1
No	3.8	4.7
Family on Welfare		
Yes	6.2	5.8
No	4.2	4.6
Emotional Problems[3]		
Yes	10.0	12.3
No	3.7	3.3
Behavioral Problems[4]		
Yes	15.1	16.6
No	2.5	2.4

Table reads as follows: About 2.6% of males in the 12-14 age group reported problem drug use in the past year.

Notes: [1]Problem drug users are defined as individuals who needed treatment for drug use. Respondents who are defined as having a "need for drug treatment" are those who: were dependent on illicit drugs in the past year; were frequent drug users in the past year (used marijuana daily or more; or used cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more); were injection drug users in the past year; used heroin in the past year; or received treatment for drug use in the past year.

[2] This includes single-parent families, step-parent families, foster families, and living with relatives.

[3] Emotional problems include the following inner emotional problems: anxiety/depression, withdrawal, and recurrent somatic complaints. (See the description of the emotional problems score in the *Measures* section of this chapter and in Appendix C.)

[4] Behavioral problems include aggressiveness and delinquency. (See the description of the behavioral problems score in the *Measures* section of this chapter and in Appendix C.)

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.5 Relative Likelihood[1] of Problem Drug Use and Any Illicit Drug Use in the Past Year, for Males and Females Aged 18 and Older, Controlling for Demographic Characteristics and Mental Syndromes: 1994-1995

Explanatory and Control Variables	Problem Drug Use		Any Illicit Drug Use	
	Males	Females	Males	Females
Ages 18 - 25	2.69†	0.78	2.73†	2.97†
Ages 26 - 34[2]	1.60	0.90	1.82†	1.77†
Black[3]	1.75†	1.19	1.35†	1.08
Hispanic[3]	0.88	0.75	0.71†	0.74†
Other race/ethnicity[3]	2.41	0.55	0.64	0.82
Living with 1 or more children[4]	1.25	0.93	1.20	1.18
Family on welfare[5]	1.54	1.65	1.15	1.69†
< High school degree[6]	1.57†	1.58†	1.07	1.09
Not employed[7]	0.96	1.36	0.75†	0.73†
Not married[8]	2.08†	2.25†	2.83†	2.24†
Age of initiation for alcohol or drug use -age 15 or younger[9]	6.96†	18.36†	5.12†	9.59†
Age of initiation for alcohol or drug use -age 16-19[9]	2.27	4.71†	2.08†	2.87†
Had any of four mental health syndromes[10]	2.18†	2.41†	1.95†	1.70†

Notes: [1] The relative likelihoods were estimated using logistic regression analyses. The relative likelihood or odds ratio for each explanatory or control variable measured the likelihood of *any* illicit drug use or problem drug use in the past year for the subgroup, relative to the reference group. For example, the adjusted odds ratio of 2.69 for males aged 18-25 means that, after statistically controlling for being age 26-24, race/ethnicity, number of children living with the respondent, family on welfare, education, employment, marital status, age of initiation for alcohol or drug use, males aged 18-25 were about 2.69 times as likely as males aged 35 and older to report problem drug use in the past year.

[2] The reference group was "age 35 and older."

[3] The reference group was "whites."

[4] The reference group was "living with no children."

[5] The reference group was "no family member in the same household receiving welfare assistance."

[6] The reference group was "some college or more education."

[7] The reference group was "full-time or part-time employed."

[8] The reference group was "married."

[9] The reference group was "initiation for alcohol or drug use at age 20 and older."

[10] The reference group was "having none of four specified mental syndromes."

† Adjusted odds ratio is significantly different from 1.0 at $\alpha = .05$.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 4.6 Relative Likelihood[1] of Any Illicit Drug Use and Any Alcohol Use in the Past Year, for Males and Females Aged 12-17, Controlling for Demographic Characteristics and Psychosocial Correlates: 1994-1995

Explanatory and Control Variables	Any Illicit Drug Use		Any Alcohol Use	
	Males	Females	Males	Females
Ages 15 - 17[2]	3.85†	3.33†	4.75†	4.40†
Black[3]	0.61†	0.66	0.57†	0.44†
Hispanic[3]	0.89	0.69	0.77†	0.60
Family relocation in the past 5 years[4]	1.61†	1.64†	1.64†	1.42
Family on welfare[5]	0.72	1.41	0.89	0.96
School dropout[6]	1.28	1.17	0.96	0.87
Non-two-biological-parent family[7]	2.04†	1.49†	1.28	1.42†
Has emotional problems[8]	0.75	1.30	0.92	1.47†
Has behavioral problems[9]	4.84†	5.46†	2.93†	4.94†

Notes: [1] The relative likelihoods were estimated using logistic regression analyses. The relative likelihood or odds ratio for each explanatory or control variable measured the likelihood of using any illicit drug in the past year for the subgroup, relative to the reference group. For example, the adjusted odds ratio of 3.85 for males aged 15-17 means that, after statistically controlling for race/ethnicity, family relocation in the past five years, family on welfare, school dropout, family structure, emotional problems, and behavioral problems, males aged 15-17 were about 3.85 times as likely as males aged 12-14 to report any illicit drug in the past year.

[2] The reference group was "age 12-14."

[3] The reference group was "whites."

[4] The reference group was "family had not moved in the past five years."

[5] The reference group was "no family member in the same household receiving welfare assistance."

[6] The reference group was "no school dropout."

[7] The reference group was "two-biological-parent family."

[8] The reference group was "no emotional problems."

[9] The reference group was "no behavioral problems."

† Adjusted odds ratio is significantly different from 1.0 at $\alpha = .05$.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

5. PREGNANCY AND SUBSTANCE USE

In this chapter we provide an overview of substance use among women of child-bearing age (aged 12-44) in the United States during pregnancy.

INTRODUCTION: There has been a steady decline in the use of alcohol, illicit drugs, and cigarettes among women of child-bearing age since 1985. Nevertheless, a significant proportion of women of child-bearing age continue to use these substances prior to and during pregnancy (Johnson, McCarter, and Ferencz, 1987; Khalsa and Gfroerer, 1991; Serdula et al., 1991; Bachman et al., 1997), and the effects of maternal substance use during pregnancy on both mother and child have remained a major medical and public health concern.

Research has shown that illicit drug use during pregnancy is associated with poor pregnancy outcomes and child development problems, including preterm delivery, increased incidence of stillbirth and neonatal mortality, low birth weight, decreased size for gestational age or head circumference, incidence of sudden infant death, and long-term developmental neurobehavioral disabilities in infants (see Jones and Lopez, 1990; Ahmed, 1992). Alcohol use during pregnancy has also been correlated with a number of adverse obstetric and neonatal consequences, such as spontaneous abortions, low birth-weight infants, and infants with fetal alcohol syndrome. Additionally, hazards associated with cigarette use during pregnancy include low birth weight, fetal and neonatal mortality, fetal distress, and long-term mental and growth retardation (see Abel, 1980; Kleinman et al., 1988). The costs of perinatal care attributed to maternal substance use are enormous (Phibbs, Bateman, and Schwartz, 1991).

PREVIOUS STUDIES: Several studies have developed estimates of the prevalence of alcohol, illicit drug, and cigarette use during pregnancy among women of child-bearing age. While this research has contributed useful information on the range and variation in prenatal substance use in subpopulations, it has primarily surveyed state or local populations, or populations that are limited to certain demographic characteristics. As a result, the estimates cannot be generalized to the population of the United States.

Furthermore, most of these studies have not provided data on frequency of substance use (see Khalsa and Gfroerer, 1991; NIDA, 1996). In order to adequately assess the prevalence of substance use among pregnant women at the national level, two national surveys based on probability sampling schemes were conducted to fill the information gap: the 1988 National Maternal and Infant Health Survey, and the 1992 National Pregnancy and Health Survey. Like other previous studies, these two national surveys did *not* compare demographic characteristics and substance use patterns between pregnant women and women who were not pregnant, because they sampled only women who had live births.

NHSDA Asks New Questions:

Beginning in 1994, the NHSDA included two new questions on pregnancy status: whether the respondent was pregnant at the time of the interview and the number of months the respondent was pregnant.

- The combined 1994 and 1995 NHSDA data on these two items make it possible to provide national estimates of the prevalence and patterns of cigarette, alcohol, and illicit drug use during pregnancy for women aged 12-44 in the household population of the United States.
- In addition, the data make it possible to compare demographic characteristics and substance use patterns between pregnant women and non-pregnant women of child-bearing age.

REFERENCE TO TABLES AND FIGURES

FIGURES IN TEXT

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5--2 Daily Use of Cigarettes by Pregnant Smokers within the Past Month. Page 5-8

5--3 Public vs. Private Health Care Coverage. Page 5-10

TABLES AT END OF CHAPTER

5.1 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Any Illicit Drug in the Past Month: 1994-1995. Page 5-14

5.2 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Alcohol in the Past Month: 1994-1995. Page 5-15

5.3 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Cigarettes in the Past Month: 1994-1995. Page 5-16

5.4 Prevalence of Alcohol, Cigarette, and Illicit Drug Use among Women, Aged 12-44, by Pregnancy Status and Child's Age: 1994-1995 (in Percentage). Page 5-17

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5.9 Access to Health Care among Women Aged 12-44, by Pregnancy Status and Past-Month Alcohol Use: 1994-1995 (in Percentage). Page 5-22

5.10 Access to Health Care among Women Aged 12-44, by Pregnancy Status and Past-Month Cigarette Use: 1994-1995 (in Percentage). Page 5-23

RESEARCH QUESTIONS:

- ❒ How prevalent is substance use among pregnant and nonpregnant women of childbearing age? *(Pages 5-6, 5-7)*

- ❒ What are the patterns of substance use among pregnant and nonpregnant women of child-bearing age who use substances? *(Page 5-8)*

- ❒ What are the demographic characteristics of women who use substances during pregnancy and how do they compare to those of women who are pregnant but do not use substances, and to those of women who are not pregnant and do use substances? *(Page 5-9)*

- ❒ What proportion of pregnant women who use substances have health insurance coverage and a usual place for health care? *(Page 5-10)*

MEASURES:

The 1994-1995 NHSDA collected data on:

- **PAST-YEAR AND PAST-MONTH** use of alcohol, illicit drugs, and cigarettes;
  - frequency of *past-month* use of alcohol and cigarettes;
  - number of alcoholic drinks per day (on the days the respondent drank);
  - number of cigarettes smoked per day (on the days the respondent smoked).
- pregnancy status at the time of the interview;
- health insurance coverage in the past month;
- whether the respondent had a usual place for health care; and
- demographic characteristics.

Women were classified as having used alcohol, illicit drugs, or cigarettes in the past month when they reported they had:

- had a drink of any alcoholic beverage within the past 30 days;
- used *any* of the illicit drugs (i.e., marijuana, cocaine, inhalants, hallucinogens, heroin; or nonmedical use of stimulants, sedatives, tranquilizers, and analgesics) one or more times within the past 30 days; and/or
- smoked *any* cigarette within the past 30 days.

Due to the small number of sample cases who were pregnant and had used illicit drugs in the past month, most of this chapter focuses on alcohol and cigarette use.

ONLY DATA OBTAINED FROM WOMEN AGED 12-44 WERE USED FOR ANALYSES IN THIS CHAPTER.

❒ How prevalent is substance use among pregnant and nonpregnant women of childbearing age?

Pregnancy and Illicit Drug Use

Approximately 4%, or 2.75 million, of the 64.5 million women aged 12-44 represented in the 1994-1995 NHSDA-surveyed population were pregnant at the time of the interview. An estimated 2.3%, or 62,000 pregnant women, used illicit drugs in the past month (see Tables 5.1 and 5.4).

Pregnancy and Alcohol Use

Approximately 21.2%, or 584,000 of the 2.75 million pregnant women aged 12-44 represented in the 1994-1995 NHSDA-surveyed population, used alcohol in the past month (see Tables 5.2 and 5.4). While only about 8% of these pregnant women reported drinking on more than five days in the past month, nearly a third reported having three or more drinks on the days they drank (see Table 5.5).

Pregnancy and Cigarette Use

Approximately 21.5%, or 591,000 of the 2.75 million pregnant women aged 12-44 represented in the 1994-1995 NHSDA-surveyed population, smoked cigarettes in the past month (see Table 5.3). More than a quarter of these pregnant smokers (28.5%) reported heavy smoking in the past month (i.e., one or more packs of cigarettes each day). (See Table 5.6 and Figure 5-2.)

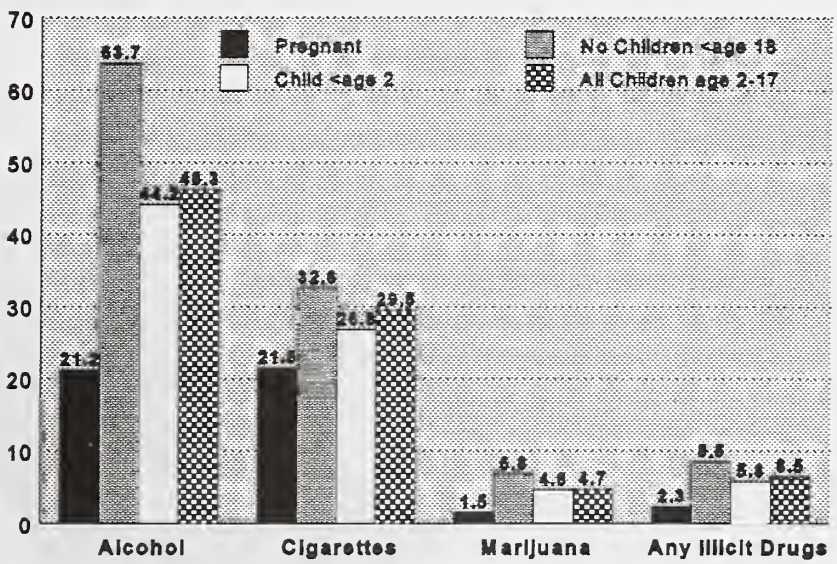
Reduced Rate of Use During Pregnancy

Women who were pregnant at the time of the interview reported a significantly lower prevalence of past-month use of cigarettes, alcohol, marijuana, and *any* illicit drugs than their non-pregnant counterparts. About 21.2% of pregnant women compared with 44.2% of women who lived with at least one child under age 2, and 46.3% of women who lived with children aged 2-17, reported past-month alcohol use; while only 21.5% of pregnant women but 26.8% of women who lived with at least one child under age 2 and 29.5% of women who lived with children aged 2-17, had used cigarettes in the past month. (See Table 5.4 and Figure 5–1.)

The differences in prevalence of past-month substance use between pregnant women and nonpregnant women who had children suggest that women may have reduced or stopped use of alcohol, cigarettes, and illicit drugs during pregnancy, but significantly increased use of these substances after they gave birth.

Percentage of Women Aged 12-44 Reporting Substance Use in the Past Month, by Pregnancy and Children's Age

Figure 5–1

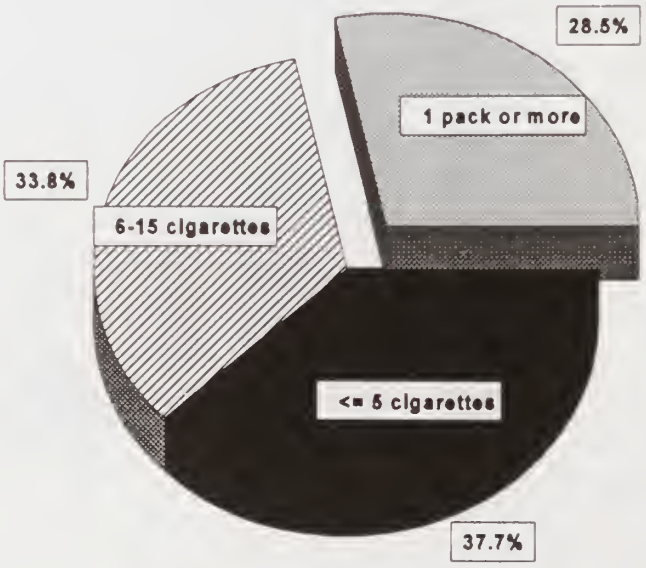


❒ What are the patterns of substance use among pregnant and nonpregnant women of child-bearing age who use substances?

Pregnant alcohol-using women used alcohol significantly less frequently than their counterparts who were not pregnant. Only 7.7% of pregnant past-month drinkers reported using alcohol on more than 5 days in the past month, compared to 25.6% of non-pregnant past-month alcohol-using women (see Table 5.5). However, there was no difference between pregnant and non-pregnant drinkers in the reported average number of alcoholic drinks per day (on the days that they drank).

There was also a significant difference between pregnant and non-pregnant cigarette smokers in their pattern of smoking (see Table 5.6). Pregnant smokers were less likely than non-pregnant smokers to smoke 16 or more cigarettes (or a pack or more) per day on the days that they smoked (28.5% vs. 38.4%).

Daily Use of Cigarettes by Pregnant Smokers within the Past Month
Figure 5–2



❒ What are the demographic characteristics of women who use substances during pregnancy and how do they compare to those of women who are pregnant but do not use substances, and to those of women who are not pregnant and do use substances?

Pregnant Women Who Used Alcohol: Of women who were pregnant at the time of the interview and had used alcohol in the past month, about three-quarters (77%) were white or in the 18-34 age group (72%). About one-half (48%) had a high school education or less. Approximately one-third were not married (34%), 29% were not employed, and 13% lived in households in which a member received welfare assistance in the past year. And two-thirds (68%) had one or more children under age 18 living with them. (See Table 5.7.)

Compared to pregnant women who had not used alcohol in the past month, women who were pregnant at the time of the interview and had used alcohol in the past month were more likely to be white and employed. Compared to non-pregnant alcohol-using women, a greater proportion of pregnant alcohol-using women were married and in the "other" employment category (such as homemaker, retired, disabled, and student).

Pregnant Women Who Used Cigarettes: Relative to pregnant women who did not use cigarettes, pregnant cigarette-using females were more likely to be never-married, in the 18-25 age group, have less than a high school education, and live in households in which a family member had received welfare assistance in the past year. Relative to non-pregnant cigarette-using women, a greater proportion of pregnant cigarette-using women were younger, less educated, in the "other" employment category, married, and receiving welfare assistance (see Table 5.8).

❒ What proportion of pregnant women who use substances have health insurance coverage and have a usual place of health care?

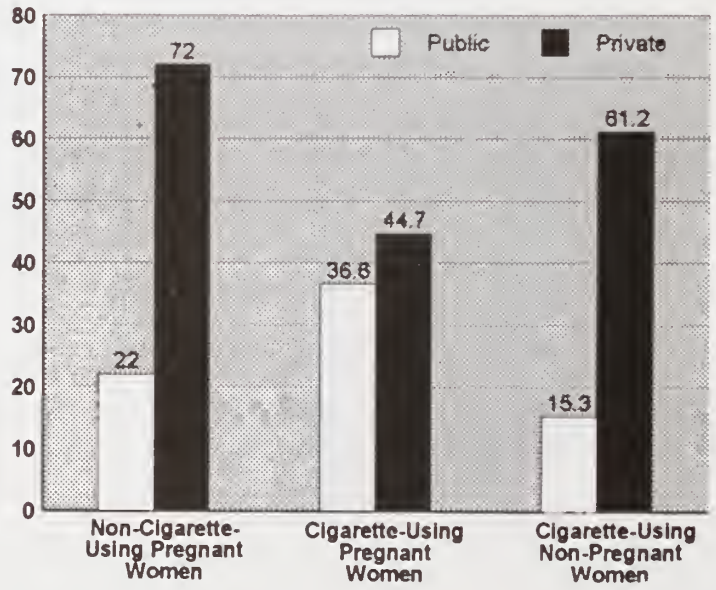
Among women aged 12-44, those who were pregnant were more likely to have health insurance coverage than those who were not pregnant (88% vs. 84%). This is primarily because pregnant women were covered under Medicare or Medicaid at a higher rate than non-pregnant women.

There were no significant differences in rates of health insurance coverage between pregnant women who used alcohol and those who did not. However, there were significant differences in health insurance coverage between pregnant smokers and nonsmokers. Among pregnant smokers, only 45% had private health insurance, and 37% were covered under Medicare or Medicaid. Among non-smoking pregnant women, 72% had private insurance and 22% were covered by Medicare or Medicaid. Overall, about 19% of pregnant smokers and 22% of non-pregnant smokers did not have any health insurance. (See Tables 5.9 and 5.10.)

About 90% of women aged 12-44 reported having a usual place for health care, and there were no significant differences by pregnancy status or past-month alcohol or cigarette use.

Public vs. Private Health Care Coverage

Figure 5–3



METHODOLOGICAL LIMITATIONS

The NHSDA was not designed to directly assess prenatal drug use. Specifically, the NHSDA collected data on use of alcohol, illicit drugs, and cigarettes in the 12 months, and in the 30 days, preceding the interview. The **exact timing of substance use,** therefore, was not available for determining whether the reported substance use took place *prior to or during* pregnancy. However, reported substance use in the past 30 days by women reporting that they are pregnant would in most cases reflect use while they were pregnant. The only exception would be women who became pregnant during the past 30 days (after their most recent use of a substance).

The analyses were also limited by the exclusive use of self-report data rather than urine tests, and the urine test results of some studies suggest that there was some underreporting of substance use among women who had live births.

Detailed estimates of the prevalence and patterns of use for illicit drugs could not be provided, because the number of women who were pregnant at the time of the interview and reported using illicit drugs in the 30-day period preceding the interview was too small. It is thus possible that pregnant women who used illicit drugs differed significantly from those who used alcohol or cigarettes, in demographic characteristics and access to health care. Finally, the cross-sectional research design of the NHSDA precludes the direct assessment of changes in use of alcohol, illicit drugs, and cigarettes *prior to* and *after* the respondents became knowledgeable about their pregnancy. As a result, causal conclusions about the relationship between pregnancy and substance use cannot be drawn from the analyses in this chapter.

CONCLUSIONS

At the time of the 1994-95 NHSDA interview, approximately 2.3% of pregnant women aged 12-44 had used illicit drugs in the past month. This equals 62,000 pregnant women in the United States.

About a fifth (21.2%) of pregnant women aged 12-44 were pregnant *and* had used alcohol in the past month. Of this pregnant, alcohol-using group, nearly a third reported having three or more drinks on the days they drank.

About a fifth (21.5%) of pregnant women aged 12-44 said they had smoked cigarettes in the past month. And more than a quarter of these pregnant smokers reported heavy smoking in the past month--i.e., one or more packs of cigarettes each day.

Compared to pregnant women who did not report past-month alcohol use, pregnant women who had used alcohol in the past month were more likely to be white and employed. In contrast, relative to pregnant women who did not use cigarettes in the past month, pregnant cigarette-using women were more likely to be never-married, aged 18-25, have less than a high school education, and to have a member of their household receiving welfare assistance.

In general, the data indicate that significant numbers of pregnant women in the US use alcohol, cigarettes, and *any* illicit drug. At the same time, pregnant women reported significantly lower prevalence of substance use in the past month than their counterparts who were not pregnant. This is true for alcohol, for cigarettes, and for *any* illicit drugs.

There is some evidence that women who generally use alcohol, tobacco, and illicit drugs may reduce or stop their use of these substances during pregnancy, but begin to use them again after they give birth, since nonpregnant women with children in the household tend to report higher rates of substance use than pregnant women.

TABLES

Table 5.1 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Any Illicit Drug[1] in the Past Month: 1994-1995

	Pregnant		Not Pregnant		Total Surveyed Women Aged 12-44
	No Illicit Drug Use in the Past Month	Illicit Drug Use in the Past Month	No Illicit Drug Use in the Past Month	Illicit Drug Use in the Past Month	
Unweighted Number	742	28	15,455	1,338	17,563
Estimated Population	2,686,614	62,116	57,393,326	43,15,941	64,457,996
Percentage of Total Females Aged 12-44	4.2	0.1	89.0	6.7	100.00

Table reads as follows: Among the total surveyed females aged 12-44, 4.2% were pregnant and did not use any illicit drug in the past 30 days.

Note: [1] Any illicit drug use indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any prescription-type psychotherapeutic used nonmedically.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.2 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Alcohol in the Past Month: 1994-1995

	Pregnant		Not Pregnant		Total Surveyed Women Aged 12-44
	No Alcohol Use in the Past Month	Alcohol Use in the Past Month	No Alcohol Use in the Past Month	Alcohol Use in the Past Month	
Unweighted Number	618	152	9,270	7,523	17,563
Estimated Population	2,164,672	584,058	30,030,570	31,678,697	64,457,996
Percentage of Total Females Aged 12-44	3.3	0.9	46.6	49.1	100.00

Table reads as follows: Among the total surveyed females aged 12-44, 3.3% were pregnant and did not use any alcohol in the past 30 days.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.3 Percentage and Estimated Number of Pregnant Women, Aged 12-44, Who Used Cigarettes in the Past Month: 1994-1995

	Pregnant		Not Pregnant		Total Surveyed Women Aged 12-44
	No Cigarette Use in the Past Month	Cigarette Use in the Past Month	No Cigarette Use in the Past Month	Cigarette Use in the Past Month	
Unweighted Number	555	215	11,321	5,472	17,563
Estimated Population	2,157,393	591,337	43,163,506	18,545,760	64,457,996
Percentage of Total Females Aged 12-44	3.3	0.9	67.0	28.8	100.00

Table reads as follows: Among the total surveyed females aged 12-44, 3.3% were pregnant and did not use cigarettes in the past month.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.4 Prevalence of Alcohol, Cigarette, and Illicit Drug Use among Women, Aged 12-44, by Pregnancy Status and Child's Age: 1994-1995 (in Percentage)

Substance	Women Aged 12-44											
	Used in Lifetime				Used in Past Year				Used in Past Month			
		Not Pregnant				Not Pregnant				Not Pregnant		
	Pregnant	No Children Under Age 18	Has Child Aged <2[1]	All Children Aged 2-17	Pregnant	No Children Under Age 18	Has Child Aged <2[1]	All Children Aged 2-17	Pregnant	No Children Under Age 18	Has Child Aged <2[1]	All Children Aged 2-17
Any illicit drug[2]	44.8	49.0	42.2	40.0	10.1	18.0	10.3	12.1	2.3	8.5	5.8	6.5
Marijuana or hashish	41.5	45.0	39.0	35.7	8.6	14.5	7.6	8.4	1.5	6.8	4.6	4.7
Alcohol	86.1	88.1	77.9	75.2	63.6	78.4	61.5	62.3	21.2	63.7	44.2	46.3
Cigarettes	69.4	71.4	63.9	63.4	30.8	37.5	29.7	32.7	21.5	32.6	26.8	29.5

Table reads as follows: Among female respondents aged 12-44 who were pregnant, 44.8% reported using any illicit drug in their lifetime.

Notes: [1] The respondent and the child(ren) both (all) reside in the same household.
[2] Any illicit drug indicates use at least once of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any psychotherapeutics used nonmedically.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.5 Patterns of Alcohol Use Among Women Aged 12-44 Who Used Alcohol in the Past Month, by Pregnancy Status: 1994-1995 (in Percentage)

	Pregnant and Used Alcohol in the Past Month	Not Pregnant and Used Alcohol in the Past Month
Frequency of past-month alcohol use		
≤ 5 days	92.3	74.4
6-30 days	7.7*	25.6
Number of alcoholic drinks per day		
1 or 2 drinks	69.6	67.5
3 or more drinks	30.4*	32.5

Table reads as follows: Among female respondents aged 12-44 who were pregnant and used alcohol in the past month, 92.3% reported using alcohol 5 days or less in the past month.

Notes: * Low precision.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.6 Patterns of Cigarette Use Among Women Aged 12-44, Who Used Cigarettes in the Past Month, by Pregnancy Status: 1994-1995 (In Percentage)

	Pregnant and Used Cigarettes in the Past Month	Not Pregnant and Used Cigarettes in the Past Month
Frequency of past-month cigarette use		
≤ 5 days	16.0*	15.3
6-30 days	84.0	84.7
Number of cigarettes smoked per day		
≤ 5 cigarettes	37.7	35.3
6-15 cigarettes	33.8	26.3
16 or more cigarettes (1 or more pack)	28.5	38.4

Table reads as follows: Among female respondents aged 12-44 who were pregnant and used cigarettes in the past month, 16.0% reported using cigarettes 5 days or less in the past month.

Notes: * Low precision.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.7 Demographic Characteristics of Women Aged 12-44, by Pregnancy Status and Past-Month Alcohol Use: 1994-1995 (in Percentage)

	Pregnant and No Alcohol Use in the Past Month	Pregnant and Used Alcohol in the Past Month	Not Pregnant and No Alcohol Use in the Past Month	Not Pregnant and Used Alcohol in the Past Month
Age Groups (Years)				
12 - 17	4.9	5.0*	28.1	6.8
18 - 25	38.7	29.7	18.3	23.9
26 - 34	43.2	42.1	23.7	32.3
35 - 44	13.2*	23.3*	29.8	36.9
Total	100.0	100.0	100.0	100.0
Race/Ethnicity				
White	64.2	77.1	63.0	78.4
Black	15.1	9.5	15.9	10.7
Hispanic	15.1	7.4*	14.3	7.6
Total[1]	94.4	94.0	93.2	96.7
Adult Education[2]				
Less than high school	17.4	16.9*	18.3	11.9
High school graduate	35.3	31.0	36.6	32.0
Some college	23.7	27.6*	25.8	28.0
College graduate	23.6	24.5*	19.3	28.1
Total	100.0	100.0	100.0	100.0
Current Employment[3]				
Full-time	39.0	52.0	45.4	56.5
Part-time	15.4	19.4	17.0	19.3
Unemployed	7.0	2.4*	5.8	5.2
Other	38.6	26.2	31.8	19.0
Total	100.0	100.0	100.0	100.0
Marital Status[4]				
Married	71.4	66.5	51.7	51.4
Divorced or separated	5.5*	9.0*	10.0	13.0
Never married	23.1	24.5	38.3	35.6
Total	100.0	100.0	100.0	100.0
Family Participated in Welfare Programs				
Yes	13.5	13.1*	11.8	8.5
No	86.5	86.9	88.2	91.5
Total	100.0	100.0	100.0	100.0
No. of Children < Age 18 Living With				
None	32.6	32.3*	22.8	38.0
One	36.6	32.8	26.6	22.8
Two	20.4	21.0*	28.7	25.6
Three and more	10.4	13.9*	21.9	13.6
Total	100.0	100.0	100.0	100.0

Table reads as follows: Among female respondents who were pregnant and did not use any alcohol in the past month, 4.9% were aged 12-17.

Notes: * Low precision.

[1] Total is less than 100%, because category for "other race/ethnicity" is not included.

[2] Data on adult education are not applicable to youth aged 12-17.

[3] Data on current employment are not applicable to youth aged 12-17.

[4] Data on marital status are not applicable to youth aged 12-17. Widows are excluded from this table as they represent less than 1% of women aged 12-44.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.8 Demographic Characteristics of Women Aged 12-44, by Pregnancy Status and Past-Month Cigarette Use: 1994-1995 (in Percentage)

	Pregnant and No Cigarette Use in the Past Month	Pregnant and Used Cigarettes in the Past Month	Not Pregnant and No Cigarette Use in the Past Month	Not Pregnant and Used Cigarettes in the Past Month
Age Groups (Years)				
12 - 17	4.0*	8.2*	20.0	10.7
18 - 25	34.2	46.1	20.4	23.1
26 - 34	44.2	38.6	27.5	29.7
35 - 44	17.6*	7.1*	32.2	36.5
Total	100.0	100.0	100.0	100.0
Race/Ethnicity				
White	65.1	73.7	68.0	77.6
Black	13.9	14.0	13.8	11.9
Hispanic	14.8	8.6*	12.4	7.4
Total[1]	93.8	96.3	94.2	96.9
Adult Education[2]				
Less than high school	12.0	37.4	10.6	22.7
High school graduate	33.1	39.4	31.5	39.1
Some college	26.9	15.6*	27.9	25.4
College graduate	28.0	7.5*	30.0	12.8
Total	100.0	100.0	100.0	100.0
Current Employment[3]				
Full-time	43.5	34.9	51.6	52.2
Part-time	16.7	15.2*	19.6	15.7
Unemployed	5.3*	8.5*	4.7	7.2
Other	34.5	41.4	24.2	24.9
Total	100.0	100.0	100.0	100.0
Marital Status[4]				
Married	74.5	55.5	55.0	44.2
Divorced or separated	5.1*	10.4*	8.5	18.4
Never married	20.4	34.2	36.5	37.4
Total	100.0	100.0	99.5	100.0
Family Participated in Welfare Programs				
Yes	10.0	25.8	8.0	15.2
No	90.0	74.2	92.0	84.8
Total	100.0	100.0	100.0	100.0
No. of Children < Age 18 Living with				
None	34.2	26.5	29.5	33.1
One	36.2	34.1	24.1	25.9
Two	19.6	23.8	27.8	25.5
Three and more	10.0	15.6*	18.6	15.5
Total	100.0	100.0	100.0	100.0

Table reads as follows: Among female respondents aged 12-44 who were pregnant and did not use any cigarettes in the past month, 4.0% were in the 12-17 age group.

Notes: * Low precision.
[1] Total is less than 100%, because category for "other race/ethnicity" is not included.
[2] Data on adult education are not applicable to youth aged 12-17.
[3] Data on current employment are not applicable to youth aged 12-17.
[4] Data on marital status are not applicable to youth aged 12-17. Widows are excluded from this table as they represent less than 1% of women aged 12-44.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.9 Access to Health Care Among Women Aged 12-44, by Pregnancy Status and Past-Month Alcohol Use: 1994-1995 (in Percentage)

	Pregnant and No Alcohol Use in the Past Month	Pregnant and Used Alcohol in the Past Month	Not Pregnant and No Alcohol Use in the Past Month	Not Pregnant and Used Alcohol in the Past Month
Covered by MEDICARE or MEDICAID				
Yes	26.8	19.1	13.7	8.2
No	73.2	80.9	86.3	91.8
Covered by Private Health Insurance/HMO				
Yes	66.3	66.2	66.2	74.1
No	33.7	33.8	33.8	25.9
Covered by Any Health Insurance				
Yes	90.7	84.7	84.2	84.6
No	9.3	15.3	15.8	15.4
Had Usual Place for Health Care				
Yes	92.0	89.9	88.4	87.7
No	8.0*	10.6*	11.6	12.3

Table reads as follows: Among female respondents who were pregnant and did not use any alcohol in the past month, 26.8% were covered by MEDICARE or MEDICAID.

Notes: * Low precision.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 5.10 Access to Health Care Among Women Aged 12-44, by Pregnancy Status and Past-Month Cigarette Use: 1994-1995 (in Percentage)

	Pregnant and No Cigarette Use in the Past Month	Pregnant and Used Cigarettes in the Past Month	Not Pregnant and No Cigarette Use in the Past Month	Not Pregnant and Used Cigarettes in the Past Month
Covered by MEDICARE or MEDICAID				
Yes	22.0	36.6	8.9	15.3
No	78.0	63.4	91.1	84.7
Covered by Private Health Insurance or HMO				
Yes	72.1	44.7	74.2	61.2
No	27.9	55.3	25.8	38.8
Covered by Any Health Insurance				
Yes	91.5	81.5	86.8	78.3
No	8.5	18.5	13.2	21.7
Had Usual Place for Health Care				
Yes	91.9	89.8	89.3	95.0
No	8.1*	10.2*	10.7	15.0

Table reads as follows: Among female respondents aged 12-44 who were pregnant and did not use any cigarettes in the past month, 22% were covered by MEDICARE or MEDICAID.

Notes: * Low precision.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

6. PARENTAL DRUG ABUSE AND CHILDREN AT RISK

In this chapter we provide estimates on drug abusers who lived with children—based on 1994 and 1995 NHSDA data that represent the U.S. adult population, and on descriptive information on female versus male drug abusers who lived with children.

INTRODUCTION: Parental drug abuse is associated with an increased risk of maladjustment in children. Research has provided empirical evidence that children with drug-abusing parents—in particular with drug-abusing mothers—are at greater risk than their peers for alcohol and drug use, delinquency, poor school performance, as well as depression and other psychiatric disorders (Clair and Genest, 1984; Gross and McCaul, 1987; Johnson et al., 1989; Moss et al., 1995; Werner, 1986; West and Prinz, 1987). Studies have shown that parents who abuse drugs tend to provide inadequate nurturing and guidance, and to provide their children with maladaptive models of coping skills.

Considerable research has been conducted to estimate the number of children who live with substance-abusing parents, in particular problem-drinking or alcoholic parents. Yet the available information on the extent of drug abuse among adults in the general population who live with children, and the demographic composition of these individuals, remains limited. This is because the research itself has methodological limitations (Seilhamer and Jacob, 1990; Sher, 1991; West and Prinz, 1987).

- First, most studies on drug abusers and children of drug abusers were conducted using small clinical populations or other nonrepresentative samples, such as college students or adolescents in public schools. Perhaps for this reason, estimates of children living with drug-abusing parents have varied greatly depending on the samples studied.
- Second, assessment techniques used to define drug abuse in parents have differed widely across studies.
- Finally, assessment of drug abuse in parents was usually based on children's reports of their parents' drug use.

REFERENCE TO TABLES AND FIGURES

FIGURES IN TEXT

6-1 Problem Drug Users Living with Children Under Age 18, by Gender. Page 6-5

TABLES AT END OF CHAPTER

6.1 Estimated Number and Percentage of the Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use: 1994-1995. Page 6-10

6.2 Estimated Number and Percentage of Problem Drug Users Aged 18 and Older, by Gender and Living with Children Under Age 18: 1994-1995. Page 6-11

6.3 Percentage Distribution of Demographic Characteristics among Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use: 1994-1995. Page 6-12

6.4 Percentage Distribution of Mental Syndromes and Treatment for Alcohol or Drug Use among Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use: 1994-1995. Page 6-13

RESEARCH QUESTIONS:

Given the limitations of previous research, in this chapter we will take advantage of the more rigorous and thorough NHSDA dataset (from the 1994 and 1995 surveys) to explore the following research questions:

- ❒ **How prevalent is problem drug use in women living with children under 18?** ***(Page 6-5)***

- ❒ **Are female problem drug users more likely to live with children than male problem drug users?** ***(Page 6-5)***

- ❒ **What are the demographic characteristics of female problem drug users who live with children? To what extent do these women differ from male problem drug users who live with children?** ***(Pages 6-6, 6-7)***

MEASURES:

We have developed a **problem drug use** measure to assess drug abuse in adults who live with children under age 18. For this chapter and chapter 7, respondents were defined as **PROBLEM DRUG USERS** if they:

- were dependent on a*ny* illicit drug, using criteria similar to those of the DSM-IV[1] (American Psychiatric Association, 1994), in the past year;
- were past-year frequent drug users (i.e., using marijuana daily or almost daily; or using cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more);
- were past-year injection drug users;
- had used any heroin in the past year; or
- had received treatment for drug use within the 12 months preceding the interview.

Respondents aged 18 and older who reported the presence in the household of a biological child (i.e., other than step, adopted, or foster child) aged 17 and younger were classified as **ADULTS LIVING WITH CHILDREN BELOW 18 YEARS OF AGE.**

We also included measures of **MENTAL SYNDROMES** (i.e., major depressive episode, generalized anxiety disorder, agoraphobia, panic attack, and *any* of the four specified mental syndromes); **DEMOGRAPHIC CHARACTERISTICS** (such as age, gender, race/ethnicity, education, employment, marital status, family's participation in welfare programs, and age of the child living with the respondent); and **PAST-YEAR TREATMENT FOR ALCOHOL OR DRUG USE**, to provide a profile of female versus male problem drug users who lived with children in the past year.

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[1]It is important to note that questions used to estimate drug dependence were changed slightly from 1994 to 1995. The questions used to estimate drug dependence in 1994 were designed to approximate 5 of the 7 DSM-IV criteria, while the questions used to estimate drug dependence in 1995 were developed to approximate 6 of the 7 DSM-IV criteria. Respondents were defined as dependent on a specific drug in 1994 if they indicated they had used that drug in the past year and met 3 of the 5 DSM-IV criteria covered by the 1994 dependence questions. In 1995, respondents were classified as dependent on a specific drug if they indicated they had used that drug in the past year and met 3 of the 6 DSM-IV criteria covered by the 1995 dependence questions. The DSM-IV-based estimates of drug dependence for the 1994 data are comparable to those for the 1995 data (Epstein and Gfroerer, 1997).

❒ How prevalent is problem drug use in women living with children under 18?

Of the total surveyed population of women aged 18 and older who lived with children under age 18, approximately 1.7 percent (an estimated 649,000 persons) were problem drug users (see Table 6.1).

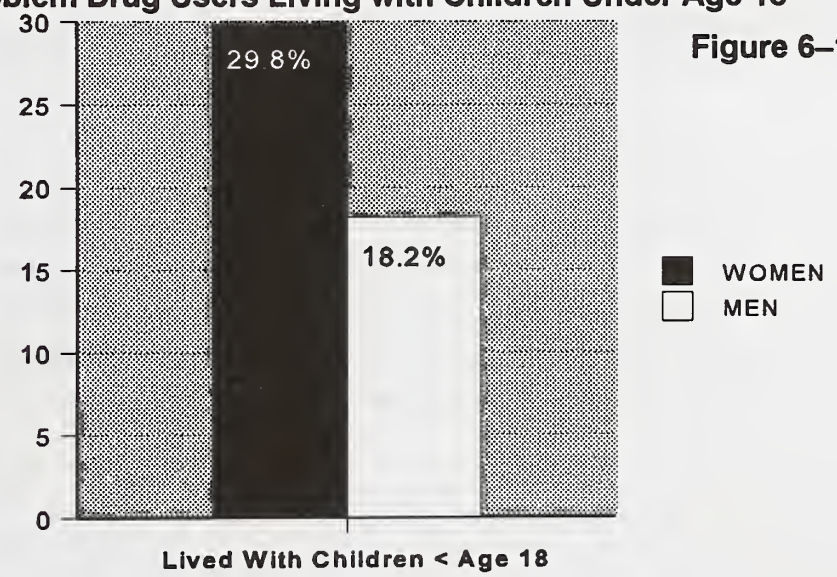
In comparison, about 2.2 percent (an estimated 645,000 persons) of men aged 18 and older who lived with children under age 18 were problem drug users. But this difference between men and women was too small to be statistically significant.

❒ Are female problem drug users more likely to live with children than male problem drug users?

The answer to this question is yes. The data show that among female problem drug users, about 30 percent lived with children under age 18 at the time of the NHSDA interview. In comparison, only 18 percent of male problem drug users lived with children under age 18 (see Figure 6-1 and Table 6.2).

Problem Drug Users Living with Children Under Age 18

Figure 6–1



❒ What are the demographic characteristics of female problem drug users who live with children? To what extent do these women differ from male problem drug users who live with children?

More than four-fifths (81%) of female problem drug users living with children were in the 26-34 and 35 and older age groups. About 72% were white. More than two-thirds (69%) had only a high school degree or less education; and 57% were not employed. A little over half (53%) were not married; and 41% lived in households in which a family member received welfare assistance in the past year (see Table 6.3). More than one-third of female problem drug users living with children reported a major depressive episode or treatment for alcohol or drug use in the past year (35% and 37%, respectively); and 45% had one or more of the four specified mental syndromes (i.e., major depressive episode, generalized anxiety disorder, panic attack, and agoraphobia). (See Table 6.4.)

Female Problem Drug Users Compared to Male Problem Drug Users

Female problem drug users who lived with children under age 18 differed significantly from their male counterparts in employment and marital status: Male problem drug users were 2.4 times as likely to be employed full-time as female problem drug users (75% versus 31%), and 1.7 times as likely to be married at the time of the interview (78% versus 47%). See Table 6.3.

A greater proportion of female problem drug users living with children than male problem drug users living with children had a family member in the same household receiving welfare assistance (41% versus 20%). But this difference was not statistically significant, because of the small number of the male problem drug users living with children in the sample. Additionally, no differences were found in age, race/ethnicity, and education between female and male problem drug users living with children.

Female Problem Drug Users Compared to Women Who Did Not Report Problem Drug Use

When we compared female problem drug users living with children to other women who lived with children but did not report problem drug use, we found that a greater proportion of female problem drug users were socially or demographically disadvantaged and had had one or more of the four specified mental syndromes in the past year. Compared to women who lived with children but did not report problem drug use, female problem drug users who lived with children were:

- About 1.7 times as likely to have less than a high school degree (28% versus 17%), and approximately 3 times as likely to live in households in which a family member received welfare assistance in the past year (41% versus 12%).

- Approximately 0.68 times as likely to be employed full-time (31% versus 46%).

- About twice as likely to be divorced or separated (31% versus 13%) or never married (21% versus 10%), but only 0.63 times as likely to be married (47% versus 75%).

- Approximately 4 times as likely to report a major depressive episode in the past year (35% versus 9%), and about 3.4 times as likely to mention having had any of four specified mental syndromes in the past year (45% versus 13%).

CONCLUSIONS

While the rates of problem drug use did not differ by gender among the adult population who lived with children under age 18, female problem drug users were about 1.6 times as likely as male problem drug users to live with children under age 18. In addition, relative to their male counterparts, female problem drug users living with children under age 18 were less likely to be employed full-time and to be married.

Compared to women who lived with children under age 18 and reported no problem drug use in the past year, female problem drug users living with children had lower educational attainment, were more likely to live in households in which a family member received welfare assistance, and reported higher rates of mental syndromes. The disadvantaged socioeconomic status and higher rates of mental syndromes among these women may partially explain the previous research findings that children of substance-abusing mothers, compared to children of substance-abusing fathers, showed greater maladjustment (Miller and Lang, 1977; Werner, 1986).

TABLES

Table 6.1 Estimated Number and Percentage of the Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use[1]: 1994-1995

	Men Aged 18 and Older Who Lived With Children < Age 18		Women Aged 18 and Older Who Lived With Children < Age 18	
	Problem Drug Use	No Problem Drug Use	Problem Drug Use	No Problem Drug Use
Unweighted Number	136	3,873	213	8,129
Estimated Population	644,533	28,167,834	649,109	36,447,107
Percent of Population	2.2	97.8	1.7	98.3

Table reads as follows: Approximately 2.2% of men aged 18 and older who lived with children under age 18 (an estimated 644,000 persons) were problem drug users.

Notes: [1] Problem drug users are defined as respondents who needed treatment for drug use in the past year. This includes respondents who were dependent on any illicit drug using criteria similar to those of the DSM-IV; past-year injection drug users; past-year frequent drug users (marijuana use daily or almost daily, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); those who had used any heroin in the past year; or those who received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 6.2 Estimated Number and Percentage of Problem Drug Users[1] Aged 18 and Older, by Gender and Living with Children Under Age 18: 1994-1995

	Problem Drug Users Living with Children < Age 18	Problem Drug Users Not Living with Children < Age 18	Total Problem Drug Users
Women			
Unweighted Number	213	524	647
Estimated Population	649,109	1,570,783	2,235,930
Percent of Population	29.8	70.2	100.0
Men			
Unweighted Number	136	709	845
Estimated Population	644,533	2,897,839	3,546,666
Percent of Population	18.2	81.8	100.0

Table reads as follows: Among female problem drug users aged 18 and older, 29.8% lived with children under age 18 (an estimated 649,109 persons).

Notes: [1] Problem drug users are defined as respondents who needed treatment for drug use in the past year. This includes respondents who were dependent on any illicit drug using criteria similar to those of the DSM-IV; past-year injection drug users; past-year frequent drug users (marijuana use daily or almost daily, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); those who had used any heroin in the past year; or those who received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 6.3 Percentage Distribution of Demographic Characteristics among Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use[1]: 1994-1995

	Parents with Problem Drug Use		Parents without Problem Drug Use	
	Men	Women	Men	Women
Age Group (Years)				
18 - 25	12.2*	18.7	5.5	11.8
26 - 34	43.0	41.9	28.2	32.8
35 and older	44.8*	39.9*	66.3	55.3
Total	100.0	100.0	100.0	100.0
Race/Ethnicity				
White	64.9	71.7	73.0	68.2
Black	14.9*	20.0	9.9	14.4
Hispanic	10.5*	7.4*	12.6	12.6
Total	90.3[2]	99.1[2]	95.5[2]	95.2[2]
Education				
Less than high school	33.0	28.3	17.0	17.1
High school graduate	44.3	40.2	31.0	34.5
Some college	12.9*	21.3*	21.3	25.1
College graduate	9.7*	10.1*	30.6	23.2
Total	100.0	100.0	100.0	100.0
Current Employment Status				
Full-time	74.9	31.3	81.5	45.7
Part-time	3.6*	12.1*	4.6	17.6
Unemployed	14.9*	12.9*	4.2	5.0
Other	6.5	43.6	9.6	31.7
Total	100.0	100.0	100.0	100.0
Marital Status				
Married	78.2	47.4	91.3	75.2
Divorced or separated	11.3*	31.4	4.9	12.5
Never married	10.1*	21.1	3.0	9.7
Total	99.6[3]	99.9[3]	99.2[3]	97.4[3]
Family Member Participated in Welfare Programs				
Yes	19.8*	40.9	5.9	12.3
No	80.2	59.1	94.1	87.7
Total	100.0	100.0	100.0	100.0

Table reads as follows: Among male problem drug users who lived with children age 17 and younger, 12.2% were aged 18-25.

Notes: [1] Problem drug users are defined as respondents who needed treatment for drug use in the past year. This includes respondents who were dependent on any illicit drug using criteria similar to those of the DSM-IV; past-year injection drug users; past-year frequent drug users (marijuana use daily or almost daily, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); those who had used any heroin in the past year; or those who received treatment for drug use in the past year.
[2] Total is not 100, because the category "other" for racial/ethnicity is not included.
[3] Total is not 100, because the category "widow" for marital status is not included.
* Low precision for reported estimates.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 6.4 Percentage Distribution of Mental Syndromes and Treatment for Alcohol or Drug Use among Population Aged 18 and Older Who Lived with Children Under Age 18, by Gender and Past-Year Problem Drug Use[1]: 1994-1995

	Parents with Problem Drug Use		Parents without Problem Drug Use	
	Men	Women	Men	Women
Major Depressive Episode				
Yes	13.2*	35.2	5.9	9.0
No	86.8	64.8	94.1	91.0
Generalized Anxiety Disorder				
Yes	3.6*	14.1*	2.2	2.4
No	96.4	85.9	97.8	97.6
Agoraphobia				
Yes	3.7*	5.5*	1.2	2.1
No	97.2	94.5	98.8	97.9
Panic Attack				
Yes	8.3*	16.9*	1.7	3.6
No	91.7	83.1	98.3	96.4
Any of the Above Mental Syndromes				
Yes	19.9*	44.9	8.0	13.2
No	80.1	55.1	92.0	86.7
Treatment for Alcohol or Drug Use in the Past Year				
Yes	47.8	36.6	1.2*	0.4*
No	52.2	63.4	98.8	99.6

Table reads as follows: Among male problem drug users who lived with children under age 18, 13.2% reported major depressive episodes in the past year.

Notes: * Low precision for reported estimates.
[1] Problem drug users are defined as respondents who needed treatment for drug use in the past year. This includes respondents who were dependent on any illicit drug using criteria similar to those of the DSM-IV; past-year injection drug users; past-year frequent drug users (marijuana use daily or almost daily, or weekly use of cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants); those who had used any heroin in the past year; or those who received treatment for drug use in the past year.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

7. WOMEN'S USE OF DRUG TREATMENT SERVICES

In this chapter we provide an overview of women's use of drug abuse treatment services. Specifically, we:

- **assess the prevalence of drug and alcohol treatment among women relative to that of men;**
- **examine financial resources and their relationship to rates of treatment service use among women and men who needed drug abuse treatment;**
- **compare the demographic profile of women versus men who needed drug abuse treatment but did not receive it.**

INTRODUCTION: Research has suggested that men and women differ in treatment utilization rates for substance abuse, and that these differences may be due to barriers that make it particularly hard for women to seek help (Weisner and Schmidt, 1992; Schober and Annis, 1996). Several barriers have been identified as potential obstacles for women. They include the following: a high prevalence of co-occurrence of mental health disorders among female substance abusers; inadequate social and financial resources to support women's entrance into treatment (e.g., lack of insurance coverage and inaccessibility of child care); and perceived stigma associated with drug abuse among women (Beckman and Amato, 1986; Copeland and Hall, 1992; Thom, 1986, 1987).

Research to date, however, has not systematically investigated possible gender differences in the prevalence of drug treatment. Most studies have either focused on alcohol treatment, or have been based on small samples of individuals who received drug treatment in particular facilities. Moreover, existing research has not provided empirical support for the relationship between the barriers noted above and women's use of treatment services.

REFERENCE TO TABLES

TABLES AT END OF CHAPTER

7.1 Estimated Number and Percentage of Population Aged 12 and Older Who Received Treatment for Alcohol and Drug Use in the Past Year, by Gender: 1994-1995. Page 7-11

7.2 Estimated Number and Percentage of Population Aged 12 and Older Who Needed Drug Treatment and Received Treatment, by Gender: 1994-1995. Page 7-12

7.3 Percentage of Population Aged 12 and Older with Health Insurance Coverage in the Past Month, by Gender: 1994-1995. Page 7-13

7.4 Percentage of Population Aged 12 and Older Who Needed Drug Treatment, by Gender, Family Receiving Welfare, and Insurance Coverage: 1994-1995. Page 7-14

7.5 Percentage Distribution of Demographic and Behavioral Characteristics among Population Aged 18 and Older Who Needed Drug Abuse Treatment, by Gender and Drug Treatment Status: 1994-1995. Page 7-15

RESEARCH QUESTIONS:

- ❒ **Do females and males receive treatment for drug and alcohol use at the same rate?** ***(Pages 7-5, 7-6)***

- ❒ **To what extent does the relationship between receiving drug treatment and health insurance coverage vary by gender?** ***(Page 7-7)***

- ❒ **What are the demographic characteristics and patterns of drug use among adult women who needed but did not receive treatment? Do they differ from adult women who needed and received treatment? Do they differ from adult men who needed treatment, but did not receive it?** ***(Page 7-8)***

MEASURES

The data presented in this chapter are based on information collected in the 1994-B and 1995 NHSDA. The drug use measures examined in this chapter include age of initiation of alcohol or drug use, alcohol dependence, and need for drug treatment. "Need for drug treatment" is the same as "problem drug use" in this chapter and chapter 6.

Respondents were classified as **needing drug treatment** if they:

- were dependent on *any* illicit drug in the past year, using criteria similar to those of the DSM-IV[1] (American Psychiatric Association, 1994);
- were past-year frequent drug users (i.e., using marijuana daily or almost daily; or using cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more often);
- were past-year injection drug users;
- had used any heroin in the past year; or
- had received treatment for drug use in the past year.

Measures of health insurance coverage in the past month and specified mental syndromes (i.e., major depressive episode, panic attack, generalized anxiety disorder, agoraphobia, and *any* of these four mental syndromes in the past year) were also included as correlates of receiving drug treatment, along with demographic characteristics such as age, gender, race/ethnicity, education, employment, marital status, receipt of welfare assistance by a family member in the same household, and number of children under age 18 living with the respondent.

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[1]It is important to note that questions used to estimate drug dependence were changed slightly from 1994 to 1995. The questions used to estimate drug dependence in 1994 were designed to approximate 5 of the 7 DSM-IV criteria, while the questions used to estimate drug dependence in 1995 were developed to approximate 6 of the 7 DSM-IV criteria. Respondents were defined as dependent for a specific drug in 1994 if they indicated they had used that drug in the past year and met 3 of the 5 DSM-IV criteria covered by the 1994 dependence questions. In 1995, respondents were classified as dependent for a specific drug if they indicated they had used that drug in the past year and met 3 of the 6 DSM-IV criteria covered by the 1995 dependence questions. The DSM-IV-based estimates of drug dependence for the 1994 data are comparable to those for the 1995 data (Epstein and Gfroerer, 1997).

❒ Do females and males receive treatment for drug and alcohol use at the same rate?

Adult Women and Men Aged 18 and Older

Adult females were less likely than adult males to have received alcohol and drug treatment in the past year.

- **Treatment for Drug Use:** Approximately 0.6% of the surveyed women aged 18 and older, compared to 1.3% of the surveyed men aged 18 and older, reported that they had received some type of drug treatment in the past year. This translates to an estimated 618,000 women compared to 1.2 million men received drug treatment in the past year (see Table 7.1).

- **Treatment for Alcohol Use:** About 0.9% of women compared to 2.2% of men had received some type of treatment for alcohol use in the past year. This translates to an estimated 963,000 women compared to 2.1 million men received treatment for alcohol use in the past year.

Adolescent Girls and Boys Aged 12-17

Interestingly, the gender differences in the prevalence of past-year drug treatment found among adults were reversed for respondents aged 12-17. A greater proportion of adolescent females than adolescent males had received alcohol and drug treatment in the past year. Among those who were aged 12-17, about 1.2% of females compared to only 0.6% of males received drug treatment in the past year, and 1.2% of females compared to 0.9% of males reported past-year alcohol treatment. These differences, however, were not statistically significant.

Do females and males who receive treatment for drug and alcohol use at the same rate? (Continued)

Rate of Drug Treatment Among Persons Who Needed Treatment

Women were less likely than men to receive drug treatment partly because drug use was more prevalent among men than among women. However, the gender difference in prevalence of past-year drug treatment remained even after controlling for differences in treatment need. Specifically, 30% of females aged 12 and older who needed drug treatment in the past year had received it, compared to 35% of males who needed treatment (see Table 7.2).

❒ To what extent does the relationship between receiving drug treatment and health insurance coverage vary by gender?

Health Insurance Coverage

Among the surveyed population who were 12 years of age or older in 1994 and 1995, 84% of females and 83% of males were covered by some type of health insurance. Types of insurance included private health insurance or membership in a health maintenance organization (HMO), public assistance in the form of Medicare and Medicaid, and military health care plans (such as CHAMPUS, CHAMPVA, and the VA, which cover active duty and retired career military personnel and their dependents, or disabled veterans and their dependents and survivors). No gender differences were found in private health insurance coverage.

Females were more likely than males to receive public assistance in the form of Medicare or Medicaid (24% versus 19%). Although females and males were equally likely to be covered by any type of health insurance in the past year, a smaller proportion of females than males reported that their insurance included benefits for alcohol and drug treatment (32% versus 38%).

Insurance Coverage and Receiving Drug Treatment

- Among those who needed drug abuse treatment and were covered by private insurance or an HMO, about 30% of females and 36% of males received treatment in the past year (see Table 7.4). The difference between females and males, however, was not statistically significant.
- Among those who needed drug abuse treatment and had insurance coverage for alcohol or drug treatment, males were about 1.4 times as likely as females to receive treatment (50% versus 34%).

❒ What are the demographic characteristics and patterns of drug use among adult women who needed but did not receive treatment?

Do they differ from adult women who needed and received treatment?

Do they differ from adult men who needed treatment but did not receive it?

About 40% of adult women who did not receive needed treatment were in the 18-25 age group; more than three-quarters were white (77%). About one-quarter had less than a high scnool education (24%). About 45% were either unemployed or in the "other" employment category. More than one-half had never married, and 53% lived with one or more children under age 18. Moreover, 41% were alcohol-dependent and more than two-thirds (71%) had initiated alcohol or drug use at age 14 or younger.

Adult women who did not receive needed treatment were similar to adult women who received needed treatment in behavioral and demographic characteristics, with the exception of age and marital status. Adult women who did not receive needed treatment were more likely than adult women who did receive it to be in the 18-25 age group (40% versus 19%), and to be never-married (51% versus 39%).

The demographic characteristics and patterns of drug use among adult women who did not receive needed treatment differed to some extent from those of adult men who did not receive needed treatment.

- Compared to male drug users who needed but did not receive treatment, females were more likely to be white, married, high-school graduates, and to have one or more children living with them.
- Relative to their female counterparts, male drug users who did not receive needed treatment were more likely to be employed full-time, to be dependent on alcohol, and to have initiated alcohol or drug use before age 15 (see Table 7.5).

CONCLUSIONS

Females aged 12 and older received past-year drug abuse treatment at a significantly lower rate than males aged 12 and older, even after controlling for gender differences in treatment need and insurance coverage for alcohol or drug treatment. About 30% of females aged 12 and older who needed drug treatment received it in the past year, compared to 35% of males who needed treatment. Among those who needed drug abuse treatment, approximately 34% of females and 50% of males who had insurance coverage for alcohol or drug treatment received treatment.

Adult women who did not receive needed drug treatment differed from adult men who did not receive needed treatment in demographic characteristics and patterns of substance use. Relative to their male counterparts, females who did not receive needed drug treatment were more likely to be white, married, high-school graduates, and to live with one or more children. They were less likely than their male counterparts to be employed full-time, to be dependent on alcohol, and to have initiated alcohol or drug use before age 15. The fact that the rate of receiving needed drug abuse treatment was lower among women who were married and those who lived with one or more children suggests that different barriers to receiving drug treatment may exist for females and males, and lack of child care may be an important barrier to receiving needed treatment for females but not for males.

TABLES

Table 7.1 Estimated Number and Percentage of Population Aged 12 and Older Who Received Treatment for Alcohol and Drug Use in the Past Year, by Gender: 1994-1995

	Received Alcohol Treatment		Received Drug Treatment		Received Alcohol and/or Drug Treatment	
	Males	Females	Males	Females	Males	Females
Ages 12-17						
Unweighted number	41	42	26	37	46	49
Percent of population	0.9	1.2	0.6	1.2	1.0	1.5
Estimated population	41,186	55,811	25,731	53,885	44,723	67,843
Ages 18 and Older						
Unweighted number	330	198	198	138	369	227
Percent of population	2.2	0.9	1.3	0.6	2.5	1.0
Estimated population	2,101,243	962,892	1,208,369	618,002	2,453,116	1,072,315
Total Estimated Population	2,142,429	1,018,703	1,234,100	671,887	2,497,839	1,140,158

Table reads as follows: Approximately 0.9% of male respondents aged 12-17 received alcohol treatment in the past year.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 7.2 Estimated Number and Percentage of Population Aged 12 and Older Who Needed Drug Treatment[1] and Received Treatment, by Gender: 1994-1995

	Males Who Needed Drug Treatment		Females Who Needed Drug Treatment	
	Received Treatment	Did Not Receive Treatment	Received Treatment	Did Not Receive Treatment
Unweighted Number	224	621	175	472
Percent of Population	34.8	65.2	30.0	70.0
Estimated Population	1,234,100	2,312,566	671,888	1,564,042

Table reads as follows: Among the surveyed males aged 12 and older who needed drug treatment in the past year, 34.8% received treatment.

Notes: [1] Respondents who are defined as having a "need for drug treatment" are those who: were dependent on any illicit drug in the past year; were frequent drug users in the past year (used marijuana daily or almost daily; or used cocaine, hallucinogens, inhalants, analgesics, sedatives, tranquilizers, or stimulants weekly or more); were injection drug users in the past year; had used heroin in the past year; or had received treatment for drug use in the past year.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 7.3 Percentage of Population Aged 12 and Older with Health Insurance Coverage in the Past Month, by Gender: 1994-1995

	Males Aged 12 and Older	Females Aged 12 and Older
Medicare or Medicaid		
Yes	19.3	24.1
No	80.7	75.0
Private Insurance or HMO		
Yes	72.2	71.1
No	27.7	28.9
Any Health Insurance Coverage[1]		
Yes	82.9	84.1
No	17.1	15.9
Insurance Coverage for Alcohol or Drug Treatment		
Yes	38.0	32.4
No	62.0	67.6

Table reads as follows: About 19.3% of males in the total surveyed population aged 12 and older in 1994-1995 were covered by Medicare or Medicaid in the past year.

Notes: [1] This includes Medicare, Medicaid, CHAMPUS, CHAMPVA, VA, military health care, private health insurance, or membership in a health maintenance organization.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 7.4 Percentage of Population Aged 12 and Older Who Needed Drug Treatment, by Gender, Family Receiving Welfare, and Insurance Coverage: 1994-1995

	Males Aged 12 and Older Who Needed Drug Treatment			Females Aged 12 and Older Who Needed Drug Treatment		
	Received Treatment (%)	Did Not Receive Treatment (%)	Unweighted Number	Received Treatment (%)	Did Not Receive Treatment (%)	Unweighted Number
Total	34.8	65.2	845	30.0	70.0	647
Family Receiving Welfare Assistance	36.5	63.5	128	32.3*	67.6*	185
Covered by Medicare/Medicaid	52.0*	48.0*	129	32.0	68.0	208
Covered by Private Insurance/HMO[1]	36.4	63.6	404	29.9	70.1	291
Insurance Coverage for Alcohol or Drug Treatment	49.5	50.5	204	33.6	66.4	166

Table reads as follows: Among males who needed drug abuse treatment and whose family received welfare assistance, 36.5% received drug abuse treatment in the past year.

Notes: * Low precision for reported estimates. The percentages are based on the weighted NHSDA data.
[1] This includes Medicare, Medicaid, CHAMPUS, CHAMPVA, VA, military health care, private health insurance or membership in a health maintenance organization.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

Table 7.5 Percentage Distribution of Demographic and Behavioral Characteristics among Population Aged 18 and Older Who Needed Drug Abuse Treatment, by Gender and Drug Treatment Status: 1994-1995

	Men Aged 18 and Older Who Needed Drug Treatment		Women Aged 18 and Older Who Needed Drug Treatment	
	Received Treatment	Did Not Receive Treatment	Received Treatment	Did Not Receive Treatment
Unweighted Number	216	549	153	402
Age Group (Years)				
18 - 25	15.8	41.3	18.9	39.7
26 - 34	29.1	27.0	30.1	28.2
35+	55.1*	31.7	51.0*	32.1
Total	100.0	100.0	100.0	100.0
Race/Ethnicity				
White	76.7	71.0	80.9	77.2
African-American	10.9	14.9	11.2	14.7
Hispanic	6.1	11.4	7.7	7.1
Total	100.0	100.0	100.0	100.0
Education				
Less than high school	27.9	27.7	33.7	23.6
High school graduate	35.7*	34.5	34.2*	39.8
Some college	21.2*	28.2	18.1	27.8
College graduate	15.2	9.6	14.0	8.8
Total	100.0	100.0	100.0	100.0
Current Employment Status				
Full-time	55.3*	62.4	33.2	39.2
Part-time	13.7	12.6	12.2	16.1
Unemployed	7.7	12.6	25.2*	10.9
Other	23.3*	12.4	29.4	33.8
Total	100.0	100.0	100.0	100.0
Current Marital Status				
Married	39.9*	22.7	23.4	25.3
Divorced or separated	18.2	19.0	37.6*	23.7
Never married	41.9	58.3	39.0	51.0
Total	100.0	100.0	100.0	100.0
Alcohol Dependence				
Yes	23.1	46.3	30.9	40.5
No	76.9	53.7	69.1	59.5
Total	100.0	100.0	100.0	100.0
Age of Initiation for Alcohol or Drug Use				
14 and younger	63.4*	77.7	69.0	71.3
15 and older	36.6*	22.3	31.0	28.7
Total	100.0	100.0	100.0	100.0
No. of Children < Age 18 Living with				
0	66.3	58.4	49.9*	47.3
1	11.7	19.6	24.3*	20.3
2	9.6	11.4	14.2	18.3
3 or more	12.4	10.6	11.6	14.1
Total	100.0	100.0	100.0	100.0

Table reads as follows: Among men who needed drug treatment and received it in the past year, 15.8 percent were 18-25 years old.
Notes: * Low precision for reported estimates.
Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1994-B, 1995.

8. CRIMINALITY AND SUBSTANCE USE

This chapter investigates the nature of the relationship between criminality and substance use among women aged 18 and older and among girls aged 12-17.

INTRODUCTION: Previous studies have demonstrated that there is an association between criminality and substance use among both adults and adolescents, but the specific nature of this relationship is still being debated (see Elliott, Huizinga, and Menard, 1989; Chaiken and Chaiken, 1990; Apospori et al., 1995; Kaplan and Damphousse, 1995). Research on the interdependency of criminality and substance use has revealed a complex relationship, which often varies by types and levels of substance use, and by categories of criminal offenses (Chaiken and Chaiken, 1990; Fagan, 1990; Robins and McEvoy, 1990; Bureau of Justice Statistics, 1992; Harrison and Gfroerer, 1992).

Several longitudinal studies have found that criminality and drug use coexist in certain social groups, and that the strength of the criminality-drug association increases as drug and alcohol use becomes more frequent or abusive (Bachman, O'Malley, and Johnston, 1978; Kandel, Simcha-Fagan, and Davies, 1986; White, Pandina, and LaGrange, 1987; Loeber et al., 1993). Furthermore, the limited empirical research on female adolescents indicates that although both criminality and substance use are more prevalent among males than among females, the criminality-drug association is stronger among females than among males. This is especially true with respect to serious offenses or heavy involvement in drug use (Lewis and Bucholz, 1991; Loeber et al., 1993).

The studies mentioned above are based mainly on high-risk adolescent samples or surveys of offender populations and drug users in treatment. Relatively little is known about the relationship between criminality and substance use among women in the general population.

REFERENCE TO FIGURES AND TABLES

FIGURES IN TEXT

8-1 Percentage of Past-Year Substance Users Reporting Past-Year Criminal Arrests, by Gender, Types of Substance, and Level of Substance Use. Page 8-7

8-2 Percentage of Past-Year Substance Users Reporting Past-Year Probation or Parole, by Gender, Types of Substance, and Level of Substance Use. Page 8-8

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8-4 Percentage Reporting Criminal Arrests, Parole/Probation, and Criminal Activities among Adolescent Past-Year Substance Users, by Gender. Page 8-10

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8.1 Percentage of Respondents Aged 18 and Older Reporting Past-Year Criminal Activities and Criminal Justice Involvement, by Gender and Patterns of Substance Use: 1991-1993. Pages 8-16, 8-17

8.2 Percentage of Respondents Aged 12-17 Reporting Criminal Activities and Criminal Justice Involvement in the Past Year, by Gender and Past-Year Illicit Drug Use: 1991-1993. Page 8-18

8.3 Relative Likelihood of Past-Year Criminal Arrests and Criminal Activities, for Men and Women Aged 18 and Older, Controlling for Sociodemographic Characteristics, 1991-1993. Page 8-19

RESEARCH QUESTIONS:

- ❒ **Do rates of criminal justice involvement and criminal activities differ between female and male substance users?** ***(Pages 8-7 through 8-11)***

- ❒ **How does the relationship between crime and substance use vary by gender?** ***(Pages 8-12 through 8-13)***

DATA AND MEASURES

This chapter uses the 1991-1993 pooled NHSDA data to investigate the relationship between crime and substance use for adults 18 years of age and older and for adolescents aged 12-17. By combining data from multiple years, we create a large enough sample to examine in some detail the association of crime and substance use for females and males, particularly the association with types and levels of drug use and categories of criminal offenses. We focus on the rates of criminal arrests, probation or parole, and criminal activities among women who are heavy alcohol users or are illicit drug users, and compare them to corresponding rates among men who are heavy alcohol users or are illicit drug users.

Four Groups of Substance Users

FOR ADULTS AGED 18 AND OLDER, we classified substance users into four different groups based on the respondent's self-reported patterns of substance use: (1) users of *any* illicit drug, (2) *heavy* alcohol users, (3) cocaine users, and (4) problem drug users.

- *USERS OF ANY ILLICIT DRUG* reported using one or more illicit drugs (i.e., marijuana, cocaine, inhalants, hallucinogens, heroin, and nonmedical use of psychotherapeutics) at least once in the past year.

- HEAVY ALCOHOL USERS are defined as respondents who drank five or more drinks per occasion on 5 or more days in the previous 30 days.

- COCAINE USERS reported using cocaine at least once in the past year.

- For this chapter, and chapters 3 and 4, PROBLEM DRUG USERS are defined as respondents who had *any* of the following in the previous 12 months: dependence on *any* illicit drug; receipt of treatment for drug use; frequent drug use (daily or more frequent use of marijuana, or weekly or more frequent use of psychotherapeutics, hallucinogens, inhalants, or cocaine); use of *any* heroin; and injection drug use.

Continued

DATA AND MEASURES (CONTINUED)

ADOLESCENTS AGE 12-17 were classified as users of *any* illicit drug if they reported using one or more illicit drugs (including marijuana, cocaine, inhalants, hallucinogens, heroin, and nonmedical use of psychotherapeutics) at least once in the past year.

Self-Reported Criminal Activities and Criminal Justice Involvement

We also created variables that measured criminal activities and criminal justice involvement, using self-reported criminal activities, arrests for criminal activities, and probation and parole. Previous studies have indicated that self-reported criminal arrests and criminal activities have adequate reliability and validity (e.g., Elliot and Ageton, 1980; Hindelang et al., 1979, 1981; Farrington et al., 1996). Moreover, using self-reports of criminal activities has the potential to cover all offenses that are knowingly committed, whether or not they have been reported to the authorities (Osgood et al., 1989).

Each variable is defined to indicate whether a respondent was arrested (or engaged in criminal activity) at least once in the past 12 months. Therefore, the level of criminal involvement (e.g., number of crimes committed) is not measured.

Self-Reported Criminal Arrests

FOR ADULTS AGED 18 AND OLDER, we classify criminal arrests into four categories: (1) violent offenses, (2) property offenses, (3) driving under the influence, and (4) drug sales or possession. Arrests for violent offenses include arrests for aggravated assault, other assault, robbery, forcible rape, and murder, homicide, or manslaughter. Arrests for property offenses include arrests for larceny or theft, burglary or breaking and entering, and motor vehicle theft.

We also use the summary variable of an arrest for *any* criminal offense in the past 12 months, as well as probation or parole in the past 12 months.

FOR ADOLESCENTS AGED 12-17, we use only a summary variable of an arrest for ***any* criminal offenses**, as the small number of adolescents reporting arrests does not permit the detailed examination of criminal offenses by specific categories.

Continued

DATA AND MEASURES (CONTINUED)

Self-Reported Criminal Activities

FOR ADULTS AGED 18 AND OLDER, self-reported criminal activities were grouped into six offense categories and one summary criminal activities variable:

- violent criminal activities
- property criminal activities
- property damage activities
- driving under the influence
- activities associated with drug sales
- criminal activities related to other alcohol or drug offenses, and
- *any* of the criminal activities.

- **VIOLENT CRIMINAL ACTIVITIES** are defined as using a weapon or force to get something from a person, hitting/getting into a fight, and seriously injuring someone.
- **PROPERTY CRIMINAL ACTIVITIES** include stealing, car theft, and breaking into a house or building.
- **PROPERTY DAMAGE CRIMINAL ACTIVITIES** are defined as purposely damaging or destroying another's property.
- **CRIMINAL ACTIVITIES RELATED TO OTHER ALCOHOL OR DRUG OFFENSES** include other drug-related (except sales) offenses and drunkenness or other liquor law violation.

(See Appendix B for the questions concerning self-reported involvement in the criminal justice system and criminal activities.)

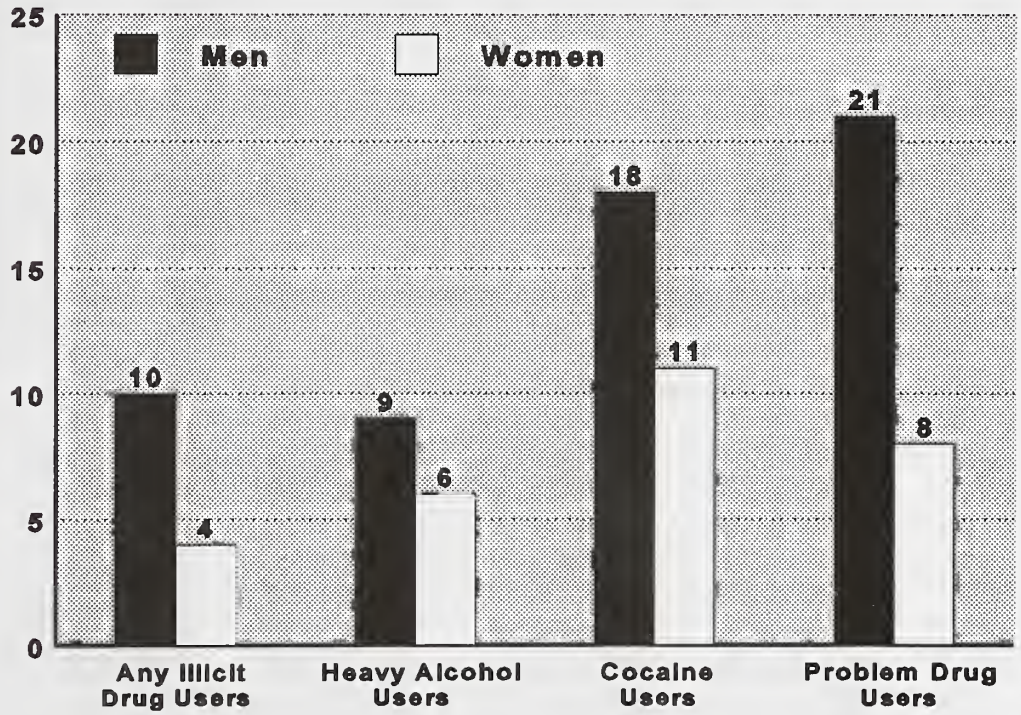
❒ Do rates of criminal justice involvement and criminal activities differ between female and male substance users?

Adult Women and Men Aged 18 and Older

Substance Use and Arrest. Adult female substance users were less likely to have been arrested in the past year than adult male substance users (see Figure 8-1 and Table 8.1). This pattern was generally true for each specific offense category for *any* illicit drug users, cocaine users, and problem drug users. However, among heavy alcohol users, gender differences in arrests were smaller and in most cases not statistically significant.

Percentage of Past-Year Substance Users Reporting Past-Year Criminal Arrests, by Gender, Types of Substance, and Level of Substance Use

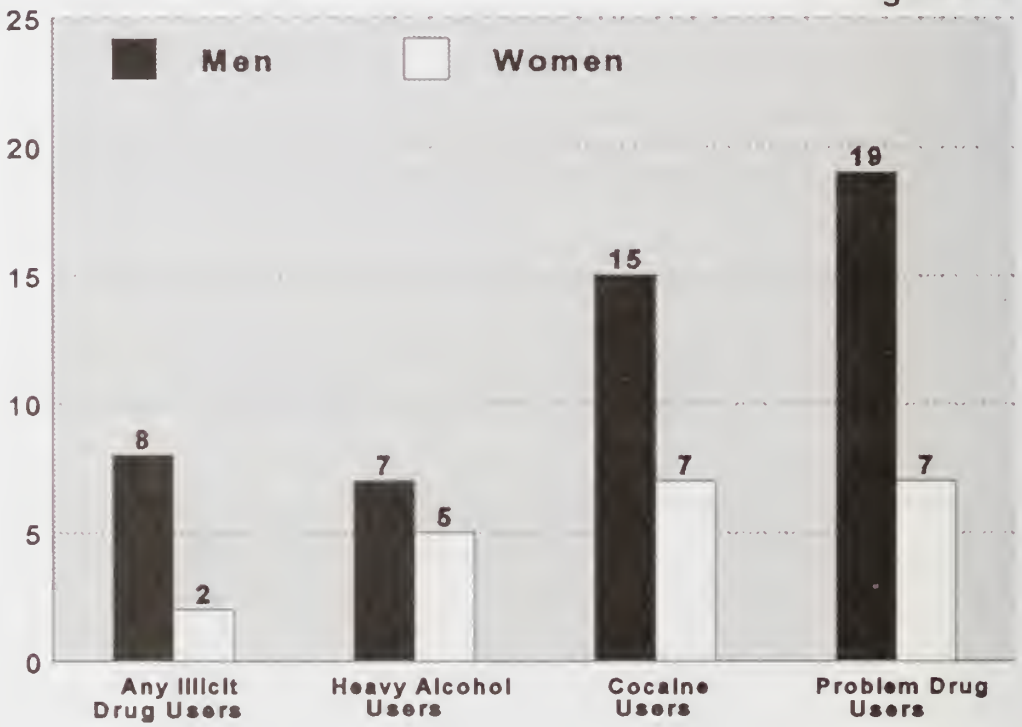
Figure 8–1



Substance Use and Probation and Parole. Being on probation or parole was significantly less prevalent among adult female past-year substance users than among adult male past-year substance users. This was true for each measure of substance use (see Table 8.1 and Figure 8-2).

Percentage of Past-Year Substance Users Reporting Past-Year Probation or Parole, by Gender, Types of Substance, and Level of Substance Use

Figure 8–2

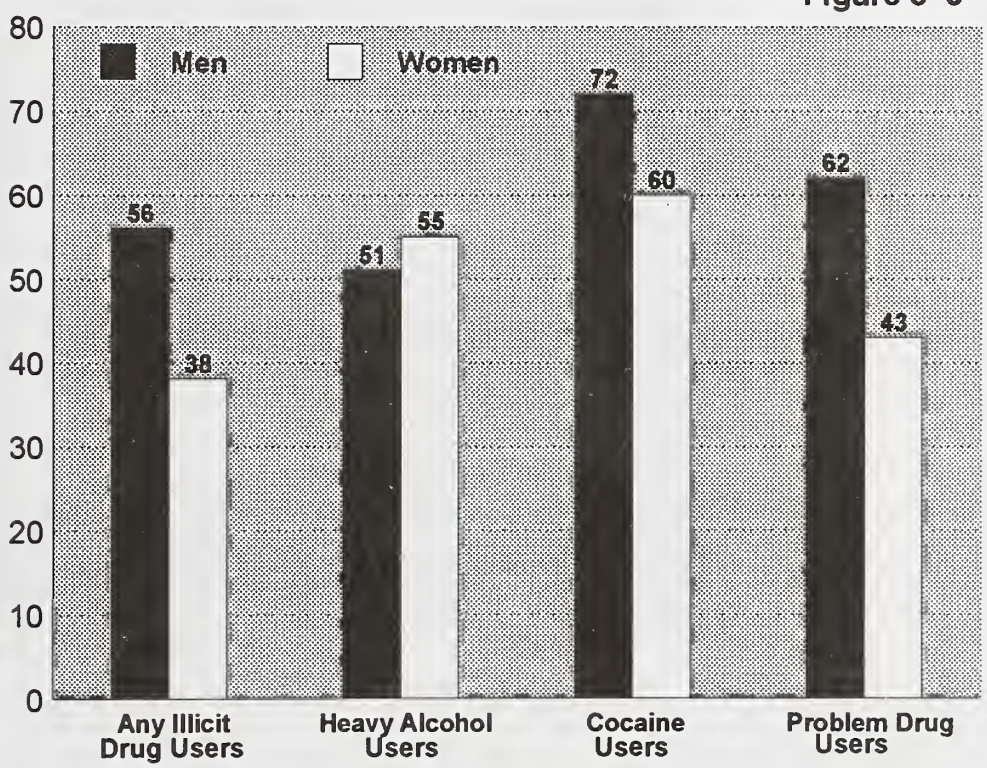


Do rates of criminal justice involvement and criminal activities differ between female and male substance users? (Continued)

Substance Use and Criminal Activities. As with arrest, a significantly lower proportion of women than men who used *any* illicit drug or cocaine in the past year or who were past-year problem drug users reported that they had been involved in criminal activities in the past year (see Table 8.1 and Figure 8-3). However, female *heavy* alcohol users were just as likely as male *heavy* alcohol users to report *any* criminal activity: 55% for females and 51% for males (the difference was not statistically significant). Similarly, nearly half (47%) of female *heavy* alcohol users reported that they had driven under the influence of alcohol or drugs in the past year, while a comparable proportion of male *heavy* alcohol users (44%) reported driving under the influence of alcohol or drugs in the past year.

Percentage of Past-Year Substance Users Reporting Past-Year Criminal Activities, by Gender, Types of Substance, and Level of Substance Use

Figure 8–3



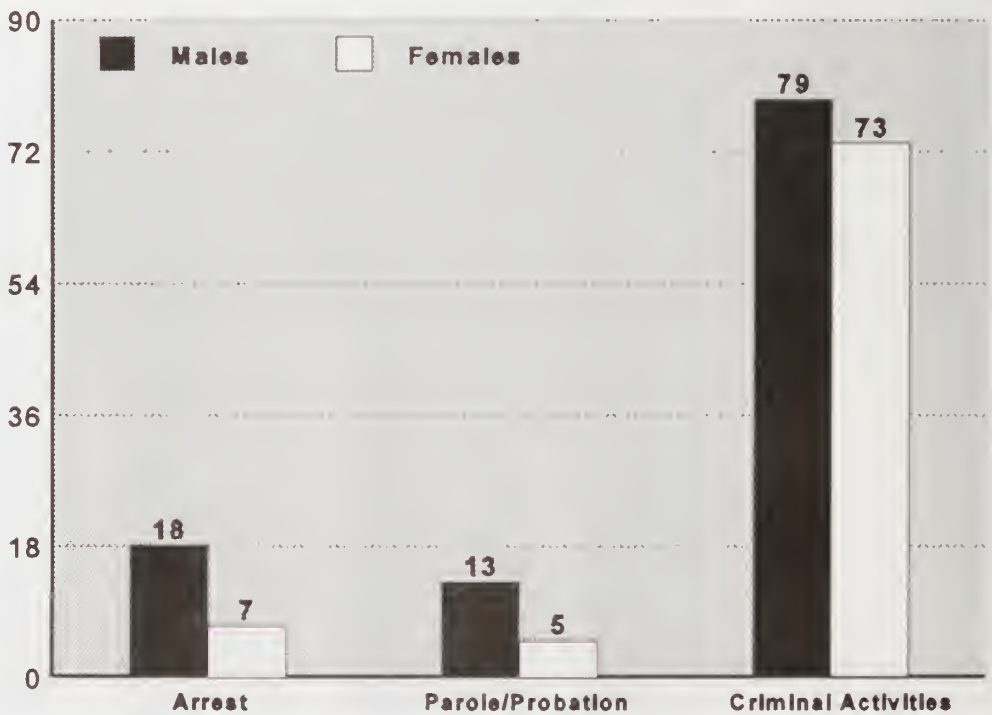
Adolescent Girls and Boys Aged 12-17

Illicit Drug Use and Arrest. While 7% of adolescent girls who used *any* illicit drug in the past year reported that they had been arrested in the past year, the rate for boys was significantly higher (18%—see Table 8.2 and Figure 8-4.)

Illicit Drug Use and Probation or Parole. About 5% of adolescent girls who used *any* illicit drug in the past year reported being on probation or parole during the past year, compared with 13% of boys who reported past-year use of *any* illicit drug (see Table 8.2).

Percentage Reporting Criminal Arrests, Parole/Probation, and Criminal Activities among Adolescent Past-Year Illicit Drug Users, by Gender

Figure 8-4



Do rates of criminal justice involvement and criminal activities differ between female and male substance users? (Continued)

Illicit Drug Use and Criminal Activities. Approximately three quarters (73%) of adolescent girls who used *any* illicit drug in the past year reported committing criminal activities in the past year. This was similar to the rate for adolescent boys who reported past-year use of *any* illicit drug (79%). Female adolescent drug users were less likely than male adolescent drug users to have committed violent crimes or sold drugs, but there was no gender difference for property crimes or driving under the influence of alcohol or drugs. The proportions of illicit drug-using adolescent girls who had committed violent or property crimes were 44% and 47%, respectively. (See Table 8.2.)

❒ How does the relationship between crime and substance use vary by gender?

Adult Women and Men Aged 18 and Older

Among both men and women, substance users were much more likely than nonusers to report criminal justice involvement or criminal activities (see Table 8.1). For example, among adult women who had not used *any* illicit drug in the past year, only 0.2% reported having been arrested in the past year, compared with 4% among women who had used *any* illicit drug in the past year. Similarly, while 38% of drug using women reported committing *any* criminal activity during the past year, only 5.5% of women not using drugs did so.

The association between illicit drug use and crime remained significant for both women and men, after statistically controlling for age, race/ethnicity, education, marital and employment status, household member's receiving welfare assistance, and age at substance use initiation (see Table 8.3). Adult women who used *any* illicit drug in the past year were six times as likely as women who had not used *any* illicit drug to have been arrested in the past year, and four times as likely to have committed *any* criminal activity in the past year. Among men, the relationship between past-year illicit drug use and crime was similar, although male illicit drug users were only three times as likely as males who did not use illicit drugs to report having been arrested in the past year. This suggests that the association between drug use and crime is stronger for women than for men.

Adolescents Aged 12-17

For both boys and girls, past-year illicit drug users were more likely than nonusers to report criminal justice involvement or criminal activities (see Table 8.2). While criminal arrest and probation or parole were rare among girls who had not used *any* illicit drug in the past year (less than one percent), among girls who had used *any* illicit drug in the past year, 7% reported arrest and 5% reported probation or parole. Nearly one quarter (23%) of adolescent females who had not used *any* illicit drug reported participating in criminal activity in the past year, but three quarters (73%) of drug-using girls reported participating in criminal activity in the past year. Similar patterns were seen for adolescent boys, but, as is the case for adult women and men, the association between drug use and crime appears to be stronger for girls than for boys.

CONCLUSIONS

Among past-year illicit drug users, adult women were less likely than adult men to report criminal arrest, parole and probation, and criminal activities in the past year. No gender difference was found for adult heavy alcohol users in the reporting of criminal activities.

Adolescent female drug users were also less likely than adolescent male drug users to report criminal arrest, parole and probation, and criminal activities in the past year. However, there was no gender difference in the percentage who reported property criminal activities and driving under the influence of alcohol or drugs.

For adolescents as well as adults, respondents who used substances in the past year were significantly more likely than those who did not use substances to report criminal arrest, parole or probation, and committing *any* criminal activity in the past year. The association between criminal arrest and illicit drug use was stronger for adult females than for adult males.

The analyses in this chapter add to our understanding of the nature of the connection between criminality and substance use among both adult women and adolescent females. Nevertheless, several methodological limitations should be noted. First, the association between criminality and substance use derived from the NHSDA data may be underestimated, because the NHSDA surveys are based on household samples and therefore generally exclude individuals most likely to be involved in criminal activities and drug use—such as incarcerated criminals—and drug users receiving treatment in institutions. Second, while the NHSDA data are useful for assessing the extent of co-occurrence of criminality and substance use, they do not permit causal analyses between criminality and substance use. Third, the self-reported data may be subject to reporting bias.

TABLES

Table 8.1 Percentage of Respondents Aged 18 and Older Reporting Past-Year Criminal Activities and Criminal Justice Involvement, by Gender and Patterns of Substance Use: 1991-1993

	Any Illicit Drug Use in the Past Year		No Illicit Drug Use in the Past Year		Heavy Alcohol Use[1] in the Past Month		No Heavy Alcohol Use[1] in the Past Month	
	Men	Women	Men	Women	Men	Women	Men	Women
Criminal Arrests								
Any Offense	10.1	4.0	1.4	0.2	9.1	5.9	1.9	0.5
Violent Offense[2]	2.8	1.1	0.4	0.1	2.6	2.0	0.6	0.1
Property Offense[3]	2.6	1.0	0.2	0.1	2.1	1.6	0.4	0.2
Driving Under Influence	5.5	1.5	0.9	0.1	5.5	4.3	1.2	0.1
Drug Sales or Possession	2.6	0.6	0.1	*	1.7	0.8	0.3	0.1
On Probation or Parole	7.9	2.3	1.2	0.3	6.6	3.9	1.7	0.4
Self-Reported Criminal Activities								
Any Offense	56.1	37.6	13.7	5.5	51.2	55.2	16.4	7.6
Violent Crime[4]	18.7	10.5	3.7	1.4	17.3	14.3	4.7	2.0
Property Crime[5]	14.1	10.1	2.2	1.2	10.3	11.0	3.2	1.9
Driving Under Influence	42.3	25.6	8.9	3.1	44.2	47.1	10.4	4.4
Drug Sales	7.1	2.3	0.1	*	6.1	2.9	0.7	0.2
Other Alcohol or Drug Offense	6.4	4.8	0.4	0.2	5.3	5.8	0.8	0.5
Property Damage	7.0	3.3	0.9	0.2	7.1	4.0	1.3	0.5

Table reads as follows: 10.1% of males who had used illicit drugs in the past year reported being arrested for any offenses in the past year.

Notes: [1] Heavy alcohol use is defined as drinking five or more drinks per occasion on 5 or more days in the past 30 days.

[2] Arrests for violent offenses include aggravated assault, other assault, robbery, forcible rape, and murder/homicide/manslaughter.

[3] Arrests for property offenses include larceny, theft, burglary, breaking and entering, and motor vehicle theft.

[4] Violent criminal activities include using weapons or force to steal from a person, hitting someone or getting into a physical fight, and seriously injuring someone.

[5] Property criminal activities include stealing, car theft, and breaking into a house or building.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1991-1993.

Table 8.1 Percentage of Respondents Aged 18 and Older Reporting Past-Year Criminal Activities and Criminal Justice Involvement, by Gender and Patterns of Substance Use: 1991-1993 (Continued)

(Continued)	Cocaine Use in the Past Year		No Cocaine Use in the Past Year		Problem Drug Use[6] in the Past Year		No Problem Drug Use[6] in the Past Year	
	Men	Women	Men	Women	Men	Women	Men	Women
Criminal Arrests								
Any Offense	17.7	11.1	2.0	0.4	20.6	8.4	2.1	0.4
Violent Offense[2]	5.2	3.2	0.6	0.1	6.8	2.4	0.6	0.1
Property Offense[3]	5.3	2.5	0.4	0.2	5.9	3.1	0.4	0.2
Driving Under Influence	9.6	4.2	1.3	0.2	11.4	2.0	1.3	0.2
Drug Sales or Possession	7.3	3.0	0.2	*	7.3	2.9	0.2	*
On Probation or Parole	15.1	7.3	1.6	0.4	19.3	7.1	1.6	0.4
Self-Reported Criminal Activities								
Any Offense	71.7	59.5	17.7	7.6	61.7	43.1	18.4	7.9
Violent Crime[5]	27.3	17.7	5.0	2.0	29.1	17.6	5.1	2.0
Property Crime[6]	21.4	16.6	3.2	1.8	21.8	15.1	3.3	1.8
Driving Under Influence	56.6	44.8	11.9	4.5	43.5	29.0	12.7	4.8
Drug Sales	16.9	6.4	0.5	0.1	18.0	7.5	0.6	0.1
Other Alcohol or Drug Offense	9.3	8.3	0.9	0.5	7.3	7.0	1.0	0.5
Property Damage	10.8	7.0	1.4	0.4	13.3	6.5	1.4	0.4

Notes: * Low precision; no estimate reported.

[6] Problem drug use is defined as having any of the following in the past 12 months: dependence on any illicit drug, injection drug use, heavy or frequent drug use, or received treatment for drug use.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1991-1993.

Table 8.2 Percentage of Respondents Aged 12-17 Reporting Criminal Activities and Criminal Justice Involvement in the Past Year, by Gender and Past-Year Illicit Drug Use: 1991-1993

	Any Illicit Drug Use in the Past Year		No Illicit Drug Use in the Past Year	
	Males	Females	Males	Females
Arrested for Any Offense	18.2	7.0	2.2	0.6
On Probation or Parole	13.1	4.7	1.2	0.5
Self-Reported Criminal Activities				
Any Offenses	79.2	73.4	40.5	23.0
Violent Crime[1]	62.6	43.7	30.4	13.9
Property Crime[2]	52.1	46.6	17.1	9.5
Driving Under Influence[3]	19.3	19.2	1.6	1.3
Drug Sales	16.2	7.4	0.3	0.2

Table reads as follows: 18.2% of adolescent males who had used illicit drugs in the past year reported being arrested in the past year.

Notes: [1] Violent criminal activities include using weapons/force to steal from a person, hitting someone or getting into a physical fight, and seriously injuring someone.

[2] Property criminal activities include stealing, car theft, and breaking into a house or building.

[3] This estimate is based on all respondents aged 12-17, but those aged 12-15 are less likely to drive at all given drivers' license age limits.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1991-1993.

Table 8.3 Relative Likelihood[1] of Past-Year Criminal Arrests and Criminal Activities, for Men and Women Aged 18 and Older, Controlling for Sociodemographic Characteristics, 1991-1993

Explanatory and Control Variables	Arrested for Any Offense		Any Criminal Activity	
	Men	Women	Men	Women
Any illicit drug use in the past year	2.94†	6.39†	4.04†	3.80†
Age 18-25[2]	2.23†	2.60†	3.47†	2.90†
Age 26-34[2]	1.90†	1.58	2.01†	2.00†
Black[3]	1.25	1.58†	0.66†	0.64†
Hispanic[3]	1.24	1.04	0.75†	0.79†
Other race/ethnicity[3]	0.23†	1.47	0.49†	0.91
Family on welfare[4]	2.15†	2.17†	1.14	1.25
< High school degree[5]	1.96†	1.73†	0.66†	0.72†
Employed[6]	0.79	0.68	1.31†	1.34†
Married[7]	0.36†	0.59	0.57†	0.51†
Age of initiation for substance use—age 15 or younger[8]	1.78†	1.77	2.16†	2.90†
Age of initiation for substance use—age 16-20[8]	1.04	1.12	1.79†	2.09†

Notes: [1]The relative likelihoods were estimated using logistic regression analyses. The relative likelihood or odds ratio for each explanatory or control variable measured the likelihood of having been arrested for any offense or having committed criminal activities in the past year for the subgroup, compared to a reference group. For example, the adjusted odds ratio of 2.23 for males aged 18-25 means that, after statistically controlling for illicit drug use, race/ethnicity, family on welfare, education, employment, marital status, and age of initiation for substance use, the likelihood of having been arrested in the past year was 2.23 times as high among males aged 18-25 as among males aged 35 and older.

[2] The reference group is "age 35 and older."

[3] The reference group is "white."

[4] The reference group is "family not on welfare."

[5] The reference group is "high school graduation and more."

[6] The reference group is "not employed."

[7] The reference group is "not married."

[8] The reference group is "age of substance initiation at 21 or older."

† Adjusted odds ratio is significantly different from 1.0 at $\alpha = .05$.

Source: Office of Applied Studies, SAMHSA, National Household Survey on Drug Abuse, 1991-1993.

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Appendix A

Data and Methods

National Household Survey on Drug Abuse

The National Household Survey on Drug Abuse (NHSDA) is the principal source of statistical information on the use of illicit drugs in the United States population. A series of studies conducted periodically since 1971, its primary goals are to estimate the prevalence of the use of alcohol, tobacco, and illicit drugs in the United States, and to monitor drug use trends over time[1]. The sample is designed to be representative of the civilian, noninstitutionalized population aged 12 and older, which is estimated to comprise more than 98% of the total population aged 12 and older in the United States. Data are obtained by administering questionnaires to respondents at their place of residence, and self-administered questionnaires are used for certain sets of sensitive questions to increase the likelihood of truthful reporting. In this report we use the NHSDA 1979-1995 data to examine the gender differences in trends of substance use and abuse in Chapter 2. We use the combined NHSDA 1994 and 1995 data to study the prevalence and patterns of substance use among women overall and among subpopulations of women in Chapters 3-7. We also use NHSDA data for 1991-1993 to investigate the relationship between crime and alcohol and drug use among adolescents aged 12-17, and among adults 18 and older in Chapter 8.

The NHSDA 1994-1995 Data

The majority of estimates in this report are derived from the NHSDA 1994B and 1995 data. These two years of data provide the most current information to date on the prevalence of alcohol, illicit drugs, and cigarette use in the United States. These surveys included questions on mental health, access to health care, and pregnancy status that were not previously available.

In 1994, two separate versions of the NHSDA questionnaire were administered as part of a split-sample design. The 1994-A NHSDA data were obtained from 4,372 respondents using the 1993 questionnaire and are comparable to the 1991-1993 NHSDA data; while the 1994-B NHSDA data were collected from 17,809 respondents using the new questionnaire and improved editing procedures for measuring rates of use of each drug, and are not comparable to previous years' NHSDA data. (For more details, see Substance Abuse and Mental Health Services Administration, 1994a, 1994b.) The 1995 survey questionnaire and editing procedures were similar to those implemented in the 1994-B NHSDA. These changes were implemented to reduce data processing time, and to improve the overall quality of data essential to researchers and policy makers, and they may have affected the estimates of substance use. (See the description of the 1979-1993 and 1994-A NHSDA data below for discussion of data from previous surveys.) The stratified, multi-stage probability sample design in the 1994-B and 1995 NHSDA

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[1] The National Commission on Marihuana and Drug Abuse sponsored the first two surveys, conducted in 1971 and 1972. The National Institute on Drug Abuse (NIDA) sponsored the NHSDA in 1974, 1976, 1977, 1979, 1982, 1985, 1988, 1990, and 1991. In October 1992, responsibility for conducting the NHSDA and preparing reports was moved to the Office of Applied Studies (OAS) within the newly created Substance Abuse and Mental Health Services Administration (SAMHSA).

interviewed nearly 18,000 respondents (17,809 and 17,747 respectively) aged 12 and older in each year, and incorporated oversampling of blacks, Hispanics, and people under age 35 to improve the accuracy of estimates for those populations. In 1993, 1994, and 1995 persons aged 18-34 who were identified as current smokers were also oversampled.

The NHSDA 1991-1993 Data

In 1991, 1992, and 1993, a battery of items asking about criminal activities and criminal justice system involvement were included in the survey. (Chapter 8 uses these data to investigate the associations between crime and alcohol and drug use in women versus men.) In addition to differences resulting from the improvements begun in 1994 in sampling design and in the questionnaire, the 1991-1993 NHSDA also differ from the 1994-1995 surveys in that six MSAs were oversampled in 1991-1993: Chicago, Denver, Los Angeles, Miami, New York, and Washington, DC. Urban areas of these six MSAs that were low in socioeconomic status (SES) were also oversampled so that separate estimates might be reported for low-SES urban areas and for all other areas of each oversampled MSA. The resulting number of completed interviews was 32,594 in 1991, 28,832 in 1992, and 26,489 in 1993.

The NHSDA 1979-1995 Trend Data

The trends in drug use presented in Chapter 2 use data from the NHSDA 1979-1995[2]. In addition to the oversampling of six MSAs and their low-SES urban areas from 1991-1993, there are some important differences between surveys of different years. First, the sample size of the NHSDA was smaller than 8,000 persons and certain groups were underrepresented until 1985, when oversampling of blacks and Hispanics was incorporated into the design and a sample size of 8,038 was attained. Additionally, prior to 1991, the NHSDA surveyed population was restricted to the household population in the 48 contiguous states in the United States. Then in 1991, Alaska and Hawaii were included in the sample for the first time, as were civilians living on military bases and persons living in noninstitutional group quarters, such as college dormitories, rooming houses, and shelters. Although this change introduces some minor inconsistencies between the samples of the 1991-1995 NHSDAs and earlier NHSDA samples, its impact on trends in drug use estimates is generally inconsequential.

Because of the change in methodology in 1994, many of the estimates from the 1993 and earlier NHSDAs are not comparable to estimates from the 1994 and later NHSDAs. Since it is important to describe long-term trends in drug use accurately, an adjustment procedure was developed and applied to the pre-1994 estimates. This adjustment uses the 1994 split sample design to estimate the magnitude of the impact of the new methodology for each drug category. (See Substance Abuse and Mental Health Services Administration, 1997b for a detailed description of the adjustment method.)

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[2] Estimates for use of various substances prior to 1979 are not examined in this chapter because they are either unavailable or incomparable to those for later years, due to changes in methodology.

Trends for perceived risks of harm from the NHSDA 1985-1994 used the 1994-A data, and no adjustments to 1985-1993 estimates were made.

Measures of Demographic Characteristics

Although each substantive chapter in this report uses different measures of substance use and abuse and correlates related to its particular topic (these are discussed within each chapter and in Appendices A and B), there are several demographic measures of respondents used throughout. Unless otherwise specified, they are as follows:

- age: respondents are generally grouped into four age groups, i.e., 12-17, 18-25, 26-34, 35 and older.

- race/ethnicity: white non-Hispanic, black non-Hispanic, Hispanic, and other race/ethnicity, which includes American Indians, Alaskan natives, Pacific Islanders, and Asians.

- educational attainment among those aged 18 and older: less than high school, high school graduate, some college, college graduate or more.

- current employment status among those aged 18 and older: employed full-time, employed part-time, unemployed, and other employment category. Other employment category includes primarily students in the 18-25 age group, retired and disabled persons in the 35 and older age group, and the unemployed or those who are laid off, those who are not looking for work, and full-time homemakers.

- current marital status: married, widowed, divorced or separated, and never married.

- welfare assistance: measures receipt of welfare assistance by any family member in the past 12 months in the form of food stamps, Supplemental Security Income or SSI, public assistance or welfare payments, and Aid to Families with Dependent Children.

Statistical Methods

This report presents results of statistical significance tests for comparisons between two gender groups and demographic subgroups defined by age, race/ethnicity, employment status, children's age, pregnancy status, or drug treatment status. Differences between groups in prevalence and frequency of substance use and abuse, rates of treatment for drug use, levels of criminal justice involvement, and in self-reported criminal activities were tested for statistical significance using Z tests. The Z test takes into account the sizes of the subsamples being compared and the degree of variation among sample members. An observed sample difference is designated as "statistically significant" if the probability of a sample difference equal to or larger than the observed sample difference is less than or equal to .05. Unless otherwise noted, differences discussed in the text were statistically significant at the .05 level or lower.

Some substantively large and interesting differences are also discussed, even though these are not statistically significant at the .05 level. A difference between groups can fall short of statistical significance even when the rate for one subgroup or year is twice or more the rate for another subgroup or year. This can occur when the rates for both groups are small, when the sample sizes are small, or both. For example, if the rate of substance use of one group is 1% and the rate of use of the comparison group is 1.5%, the difference may be statistically insignificant. Although the rate of use of the comparison group is 50% higher than the rate of use of the target group, the NHSDA sample may not be large enough to reliably demonstrate or detect a difference of this magnitude.

An estimate was considered to be less reliable if the standard error of the estimate was greater than 17.5% of the log transformation of the estimated proportion. Because of the relatively large sample sizes for most population subgroups, low precision usually occurs for prevalence estimates that are very close to zero (i.e., are $<.005\%$) or 100%. In line with the statistical practices in the *Main Findings*, *Advance Reports*, and other NHSDA publications, estimates of individual rates, percentages, and proportions that are low in statistical precision in Chapters 2-4 and 8 are omitted from all tables and noted by asterisks (*). However, in contrast to other NHSDA publications, estimates that are low in statistical precision in Chapters 5-7 are included in the tables but marked with asterisks.

All comparisons, as well as the individual rates themselves, are subject to sampling error that is readily quantified. Sampling error for an individual rate results from asking questions of a sample rather than of everyone in the surveyed population. Sampling theory provides the basis for calculating confidence intervals around the estimates and tests of significance in comparing two estimates. The size of the intervals and the tests of significance depend on: (a) sample size; (b) the interaction between the sampling procedure used and the distribution of a particular variable in the population, that is, the appropriate design effect; and (c) the degree of confidence required in the interval estimate, or level of protection against incorrect inferences ("Type 1 error"), required in the test of significance.

Nonsampling error, which includes nonresponse, misreporting, and miscoding, cannot be measured as satisfactorily as sampling error. A series of studies on the validity and reliability of general population survey data are reported elsewhere (see Turner, Lessler, and Gfroerer, 1992).

Chapters 3, 4, and 8 also display the results of multivariate analyses. Specifically, we apply multivariate logistic regression models to examine the effects of gender on substance use and abuse, and the effects of marital status and child care responsibilities on substance abuse for females, after controlling for or adjusting statistically the impacts of other important factors. Further, in order to assess gender differences in correlates of substance use and abuse and in variables that mediate the relationship between crime and substance use, we analyze the logistic regression models in Chapter 4 and 8 separately for males and females. Consistent with recent statistical advice on the use of weights in regression analysis (e.g., Winship and Radbill, 1994), the odds ratio estimates of Chapter 3, 4, and 8 use weighted data, which estimates are weighted to take into account the complex sample design of the NHSDA, rather than unweighted data. The precise method of statistical estimation applied in these logistic regression analyses

is called "weighted maximum likelihood estimation." The estimation method is implemented in the computer program SUDAAN and discussed in Shah et al. (1995).

Limitations and Methodological Issues

The NHSDA is the only survey that regularly produces estimates of drug use among members of the civilian, noninstitutionalized population aged 12 and older of the United States. The survey is an appropriate vehicle for estimating prevalence of use for cigarettes, alcohol, and other illicit drugs because it reports use of various substances that does not ordinarily come to the attention of administrative, medical, or correctional authorities. In-person interviews with a large national probability sample are the best way to estimate drug use in the general population of the United States.

Although the NHSDA is useful for many purposes, it has certain limitations. First, the data are based on self-reports of drug use, and their value thus depends on respondents' truthfulness and memory. Several studies have established the validity of self-report data (see Harrison, Haaga, and Richards, 1993; Turner, Lessler, and Gfroerer, 1992). The NHSDA procedures encourage honesty and recall. Nevertheless, some under- and overreporting may have occurred. Second, because the population of the survey is defined as the civilian, noninstitutionalized population of the United States, a small proportion (less than 2%) of the population is excluded: those living in institutional group quarters (e.g., prisons, nursing homes, treatment centers), those with no permanent residence (e.g., homeless people), and active military personnel. As a result, estimates of substance use and abuse derived from the NHSDA may be slightly lower, in particular the prevalence estimates of rarely used drugs such as heroin and hard-core drug use, as studies have demonstrated that alcohol and illicit drug use in populations living in institutional settings and those with no permanent residence differed significantly from that of the household population (National Institute on Drug Abuse, 1993).

Appendix B

NHSDA Questionnaire Items Used

NHSDA Questionnaire Items Used (Unless specified, the items are from 1994 and 1995)

DEMOGRAPHIC CHARACTERISTICS

Recorded Sex
What is your date of birth?
Are you of Hispanic or Spanish origin or descent?
Which of the groups on this card best describes you?

White
Black
Indian (American), Aleut, Eskimo
Asian or Pacific Islander
Other

Which of the following best describe your current marital status. Are you ...

Married
Widowed
Divorced or separated or
Have you never married?

Which of the statements describes your present work situation?

Working full-time, 35 hours or more a week
Working part-time, less than 35 hours a week
Have a job, but not at work because of extended illness, maternity leave, furlough, or strike
Have a job but not at work because it is seasonal work
Unemployed or laid off and looking for work
Full-time homemaker
In school only
Retired
Disabled for work
Other

How many times in the past 12 months have you moved?

What is the last grade or year that you completed in school?

Has no schooling
Elementary School Grades:
- First Grade
- Second Grade
- Third Grade
- Fourth Grade
- Fifth Grade
- Sixth Grade
- Seventh Grade
- Eighth Grade

High School Grades:
- Ninth Grade
- Tenth Grade
- Eleventh Grade
- Twelfth Grade

College/Technical School Years:
- Freshman/13th Year
- Sophomore/14th Year
- Junior/15th Year
- Senior/16th Year
- Graduate/Professional School (or higher)

Have you received a high school diploma, or a GED certificate of high school completion? Which have you received?

Are you now enrolled in any kind of school?

Are you now
- A full-time student
- A part-time student, or
- Not now enrolled in any school?

How many children under the age of 12 live here now?

Now I need some additional information about (each) the child(ren) under 12 who live(s) here. Starting with the oldest child, please tell me how old (the/each) child was on his or her last birthday.

Is the (age)-(year/month)-old child a male or a female?

What is (his/her) relationship to you?

SUBSTANCE USE

1. Cigarettes

Have you ever smoked a cigarette, even one or two puffs?

How old were you the first time you smoked a cigarette, even one or two puffs?

How long has it been since you last smoked a cigarette?

within the past 30 days
more than 30 days ago but within the past 12 months
more than 12 months ago but within the past 3 years
more than 3 years ago
I have never smoked a cigarette in my life

2. Alcohol

Have you ever, even once, had a drink of any type of alcoholic beverage? By a "drink," we mean a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it.

How old were you the first time you had a drink of any alcoholic beverage?

How long has it been since you last drank an alcoholic beverage?

within the past 30 days
more than 30 days ago but within the past 12 months
more than 30 days ago but within the past 12 months
more than 12 months ago but within the past 3 years
more than 3 years ago
I have never drunk an alcoholic beverage in my life

During the past 30 days, on how many days did you have 5 or more drinks on the same occasion? By "occasion," we mean at the same time or within a couple of hours of each other.

During the past 12 months, when you drank alcoholic beverages, on how many days did you get very high or drunk?

More than 300 days (which would be every day or almost every day)
at least 201 but no more than 300 days (that is about 5 to 6 days a week)
at least 101 but no more than 200 days (or about 3 to 4 days a week)
at least 51 but no more than 100 days (1 to 2 days a week)
at least 25 but no more than 50 days (3 to 4 days a month)
at least 12 but no more than 24 days (1 to 2 days a month)
at least 6 but no more than 11 days (less than 1 day a month)
at least 3 but no more than 5 days in the past 12 months
at least 1 but no more than 2 days in the past 12 months
You drank an alcoholic beverage in the past 12 months, but you never got very high or drunk
You have drunk alcoholic beverages, but not during the past 12 months
You have never drunk an alcoholic beverage in your life

During the past 30 days, on how many days did you have five or more drinks on the same occasion? By "occasion," we mean at the same time or within a couple of hours of each other.

3. Marijuana

Have you ever, even once, used marijuana or hashish?

How old were you the first time you used marijuana or hashish?

How long has it been since you last used marijuana or hashish?

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago
You have never used marijuana or hashish in your life

4. Cocaine

Have you ever, even once, used any form of cocaine?

How long has it been since you last used any form of cocaine?

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago
You have never used cocaine in your life

5. Crack

Have you ever, even once, used "crack?"

How long has it been since you first used "crack?"

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago
You have never used "crack" in your life

6. Heroin

Have you ever, even once, used heroin?

7. Hallucinogens

Please mark one box beside each hallucinogen to indicate whether you have ever used hallucinogen, even once?

LSD ("acid")
PCP ("angel dust," phencyclidine)
Peyote
Mescaline
Psilocybin ("mushrooms")
"Ecstasy" (MDMA)
Have you ever used a hallucinogen whose name you don't know?
Have you ever used any other hallucinogens besides the ones listed above?

How long has it been since you last used LSD, PCP, or any other hallucinogen?

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago
You have never used any hallucinogen in your life

8. Inhalants

Please mark one box beside each inhalant to indicate whether you have ever used any of the following kind of inhalant, even once, for kicks or to get high?

Amyl nitrite, "poppers," locker room odorizers, or "rush"
correction fluid, degreaser, or cleaning fluid
Gasoline or lighter fluid
Glue, shoe polish, or toluene
Halothane, ether, or other anesthetics
Lacquer thinner or other paint solvents
Lighter gases (butane, propane)
Nitrous oxide or "whippets"
Spray paints?
other aerosol sprays
any inhalant whose name you don't know
any other inhalants for kicks or to get high besides the ones listed above.

How long has it been since you last used any inhalant for kicks or to get high?

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago
You have never used any inhalant in your life

9. Psychotherapeutics

As you read the following list of prescription **pain killers**, please mark one box beside each pain killer to indicate whether you have ever used that pain killer when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription pain killers, in pill or non-pill form.

Codeine
Darvon
Demerol
Dilaudid
Methadone
Morphine
Percodan
Talwin
Tylenol with codeine
Have you ever used a pain killer whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?
Have you ever used any other pain killer beside the ones listed above, that was not prescribed for you, or that you took only for the experience or feeling it caused?

How old were you the first time you used a **pain killer** that was not prescribed for you, or that you took only for the experience or feeling it caused?

As you read the following list of prescription **tranquilizers**, please mark one box beside each tranquilizer to indicate whether you have ever used that tranquilizer when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription tranquilizers, in pill or non-pill form.

Atarax
Ativan
Diazepam
Librium
Tranxene
Valium
Xanax
Have you ever used a tranquilizer whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?
Have you ever used any other tranquilizer besides the ones listed above, that was not prescribed for you, or that you took only for the experience or feeling it caused?

How old were you the first time you used a **tranquilizer** that was not prescribed for you, or that you took only for the experience or feeling it caused?

As you read the following list of prescription **stimulants**, please mark one box beside each stimulant to indicate whether you have ever used that when it was not prescribed for you, or that you took only for the experience or feeling caused. Again, we are interested in all kinds of prescription stimulants, in non-pill form.

Benzedrine
Biphetamine
Dexamyl
Dexerdrine
Fastin
Ionamin
Methamphetamine
Methedrine
Preludin
Have you ever used a stimulant whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?
Have you ever used any other stimulant besides the ones listed above, that was not prescribed for you or that you took only for the experience for feeling it caused?

How old were you the first time you used a **stimulant** that was not prescribed for you, or that you took only for the experience or feeling it caused?

As you read the following list of prescription **sedatives**, please mark one box beside each sedative to indicate whether you have ever used that sedative when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription sedatives, in pill or non-pill form.

Dalmane
Halcion
Methaqualone (including Sopor and Quaalude)
Nembutal
Phenobarbital
Placidyl
Seconal
Tuinal
Have you ever used a sedative whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?
Have you ever used any other sedative besides the ones listed above, that was not prescribed for you, or that you took only for the experience/feeling it caused?

How old were you the first time you used a **sedative** that was not prescribed for you, or that you took only for the experience or feeling it caused?

INJECTION DRUG USE

Have you ever, even once, used a needle to inject a drug that was not prescribed for you, or that you took only for the experience or feeling it caused?

PROBLEMS CAUSED BY DRUG USE (1995)

As you read the following list of types of drugs, please mark one box beside each type of drug to indicate whether...

1. you have used that type of drug during the past 12 months.

2. you had a period of a month or more during the past 12 months when you spent a great deal of time getting the drug, using the drug, or getting over its effects.

3. you have used that kind of drug much more often or in larger amounts than you intended to during the past 12 months.

4. you have built up a tolerance for the drug so that the same amount of the drug had less effect than before during the past 12 months.

5. your use of that drug has often kept you from working, going to school, taking care of children, or engaging in recreational activities during the past 12 months.

6. your use of the drug has caused you to have any emotional or psychological problems--such as feeling uninterested in things, feeling depressed, feeling suspicions of people, feeling paranoid, or having strange ideas during the past 12 months.

7. your use of that drug has caused you any health problems--such as liver disease, stomach disease, pancreatitis, feet tingling, numbness, memory problems, as accidental overdose, a persistent cough, a seizure or fit, hepatitis, or abscesses during the past 12 months.

8. during the past 12 months, you have wanted or tried to stop or cut down on your use of that drug but found that you couldn't.

a. Cigarettes
b. Alcohol
c. Marijuana or hashish
d. Cocaine (including "crack")
e. Heroin
f. Hallucinogens, such as LSD, "acid," PCP, "Ecstasy," psilocybin (mushrooms), mescaline, peyote
g. Inhalants, such as amyl nitrite, "poppers," nitrous oxide, gasoline or lighter fluids glue, spray paints, correction fluids
h. Pain killers, such as codeine, Tylenol with codeine, Darvon, Percodan, Demerol, methadone, opiates
I. Tranquilizers, such as Valium, Xanax, Librium, Ativan, other antianxiety drugs
j. Stimulants, such as the methamphetamine, "speed," Dexedrine, Biphetamine, Benzedrine, "uppers," other amphetamines
k. Sedatives, such as methaqualone, Seconal, Tuinal, Placidyl, barbiturates, sleeping pills,"downers"

PROBLEMS CAUSED BY DRUG USE (1994)

As you read the following list of types of drugs, please mark one box beside each type of drug to indicate whether

1. you have used that type of drug during the past 12 months

2. you had a period of a month or more during the past 12 months when you spent a great deal of time getting the drug, using the drug, or getting over its effects

3. you have used that kind of drug much more often or in larger amounts than you intended to during the past 12 months

4. you have built up a tolerance for the drug so that the same amount of the drug had less effect than before during the past 12 months

5. you have often been under the effects or after-effects of that kind of drug in situations where your physical safety was threatened (such as driving a car or motorcycle, using heavy machinery, or swimming) during the past 12 months.

6. your use of the drug has caused you to have problems with your family or friends, problems at works, school, or with the police, or any emotional or psychological problems during the past 12 months.

As you read the following list of types of drugs, please mark one box beside each type of drug:

if you wanted to cut down or stop using that drug in the past 12 months,
if you did not want to cut down or stop using that drug, or
if you did not use that drug in the past 12 months, AND

whether you were able to cut down on or stop your use of that drug every time you wanted to during the past 12 months.

PROBLEMS CAUSED BY DRUG USE (1991-1993)

During the past 12 months, for which drugs have you:

1. consciously tried to cut down on your use?
2. been unable to cut down on your use, even though you tried?
3. needed larger amounts to get the same effect; that is, for which drugs could you no longer get high on the same amount you used to use?
4. used every day or almost daily for two or more weeks in a row?
5. felt that you needed or were dependent on?
6. had withdrawal symptoms; that is, you felt sick because you stopped or cut down on your use of them?

PERCEPTION OF RISK OF SUBSTANCE USE

How much do people risk harming themselves physically and in other ways when they **try one or more packs of cigarettes per day**?

How much do people risk harming themselves physically and in other ways when they **smoke marijuana once a month**?

How much do people risk harming themselves physically and in other ways when they **have four or more drinks nearly every day**?

No risk
Slight risk
Moderate risk
Great risk

TREATMENT

Have you ever received treatment or counseling for your use of alcohol or any drug, not counting cigarettes?

How many times in the past 12 months have you received treatment or counseling for use of alcohol or any drug, not counting cigarettes?

As you read the following list of places where treatment for drug use is offered, please mark one box beside each type of treatment place to indicate whether you have received treatment for your use of other drugs not counting cigarettes or alcohol in that type of facility during the past 12 months.

A hospital overnight as an inpatient
A residential drug or alcohol rehabilitation facility (overnight)
A drug or alcohol rehabilitation facility as an outpatient
A mental health center or facility as an outpatient
An emergency room
A private doctor's office
A prison or jail
A self-help group
I received treatment in some other place

How long has it been since you last received treatment or counseling for your alcohol or drug use, not counting cigarettes?

Within the past 30 days
More than 30 days ago but within the past 12 months
More than 12 months ago but within the past 3 years
More than 3 years ago

Where did you receive treatment the last time you were treated for your alcohol or other drug use, not counting cigarettes?

A hospital overnight as an inpatient
A residential drug or alcohol rehabilitation facility (overnight)
A drug or alcohol rehabilitation facility as an outpatient
A mental health center or facility as an outpatient
An emergency room
A private doctor's office
A prison or jail
A self-help group
I received treatment in some other place

As you read the following list of drugs, please mark one box beside each type of drug to indicate whether you received treatment or counseling for your use of that kind of drug the last time you received treatment.

Alcohol
Marijuana or hashish
Cocaine or "crack"
Heroin
Hallucinogens
Inhalants
Prescription painkillers or analgesics
Prescription tranquilizers
Prescription stimulants
Prescription sedatives
I received treatment for use of some other drug(s)

What was the primary drug you received treatment for during the last time you were treatment?

MENTAL HEALTH

Adults Aged 18 and Older

1. Major Depressive Episode

During the past 12 months, was there ever a time when you felt sad, blue, or depressed for two or more in a row?

For the next few questions, please think of the two-week period during the past 12 months when these feelings were worst. During that time, did the feeling of being sad, blue, or depressed usually last all day long, most of the day, about half the day, or less than half the day?

Did you feel this way every day, almost every day, or less often during those two weeks?

(1). During those two weeks, did you lose interest in most things?

(2). Did you feel tired out or low on energy all the time?

(3). Did you gain weight, lose weight or stay about the same?

(4). About how much did you (gain/lose)?

(5). Did you have more trouble falling asleep than usually do?

(6). Did that happen every night, nearly every night or less often during those two weeks?

(7). Did you have a lot more trouble concentrating than usual?

(8). At these times, people sometimes feel down themselves, no good, or worthless. Do you feel this way?

(9). Did you think a lot about death -- either your own, someone else's or death in general?

Reviewing what you just told me, you had two weeks in a row during the past 12 months when you were sad, blue or depressed and also had some other things like (READ UP TO TWO DESCRIPTIONS IN YES-BOXED RESPONSES FROM QUESTIONS (1) - (9) ABOVE). About how many weeks altogether did you feel this way during the past 12 months?

Think about the last time you felt this way for two weeks or more in a row. In what month and year was that?

During the past 12 months, was there ever a time lasting two weeks or more when you lost interest in most things like hobbies, work, or activities that usually gave you pleasure?

For the next few questions please think of the two-week period during the past 12 months when you had the most complete loss of interest in things. During that two-week period, did the loss of interest usually last all day long, most of the day, about half the day, or less than half the day?

Did you feel this way every day, almost every day, or less often during the two weeks?

(1). During those two weeks, did you feel tired out, or low in energy all the time tired?

(2). During those two weeks, did you gain weight, lose weight, or stay about the same?

About how much did you (gain/lose)?

(3). During those two weeks, did you have more trouble falling asleep than you usually do?

Did that happen every night, nearly every night, or less often during those two weeks?

(4). During those two weeks, did you have a lot more trouble concentrating than usual?

(5). At these times, people sometimes feel down on themselves, no good or worthless. Did you feel this way?

(6). During those two weeks, did you think a lot about death -- either your own, someone else's, or death in general?

Reviewing what you just told me, you had two weeks in a row during the past 12 months when you lost interest in most things and also had some other things like (READ UP TO TWO DESCRIPTIONS IN YES-BOXED RESPONSES FROM QUESTIONS (1) - (6) LISTED ABOVE). About how many weeks altogether did you feel this way during the past months?

Think about the last time you had two weeks in a row when you felt this way. In what month and year was that?

2. Generalized Anxiety Disorder

During the past 12 months, did you ever have a period lasting one month or longer when most of the time you felt worried or anxious?

Has that period ended or is it still going on?

How many months or years did it go on before it ended?

During that period, did you worry about things that were not likely to happen?

Did you worry a great deal about things that were not really serious?

During this period of worry or anxiety, did you have different worries on your mind at the same time?

How many months or years has it been going on?

Do you worry about things that are not likely to happen?

Do you worry a great deal about things that are not really serious?

Do you have different worries on you mind at the same time?

When you (are/were) worried or anxious, (are/were) you also

a. Restless?
b. Are/Were) you keyed up our on edge?
c. (Are/Were) you particularly irritable?
d. (Are/Were) you aware of your heart pounding or racing?
e. (Are/Were) you easily tired?
f. (Do/Did) you have trouble falling asleep or staying asleep?)
g. (Do/Did) you feel faint or unreal?

3. Agoraphobia

Here's a list of situations that cause some people to have unreasonably strong fears "Unreasonably strong" means being very upset or badly frightened when most people would not be afraid. During the past 12 months, did you have an unreasonably strong fear of

a. Being in a public place or a crowd or line?
b. Leaving you home or being alone away from home?
c. Crossing a bridge or riding in trains or buses?

Do you get very upset or badly frightened every time you are in (this/these) situation(s), most of the time, or only some of the time?.

How long have you had (this/these fear(s) -- less than 1 year, between 1 and 5 years, or more than 5 years?

About how many months have you had(this/there) fear(S)?

When you are in (this/these) situation(s), are you afraid that you might faint, lose control, or embarrass yourself in other ways?

When you are in (this/these) situation(s), do you worry that you might be trapped without any way to escape?

When you are in (this/these), situation(s), do you worry that help might not be available if you needed it?

4. Panic Attacks

During the past 12 months, did you ever have a spell or an attack when all of sudden you felt frighted, anxious, or very uneasy when most people would not be afraid or anxious?

During the past 12 months, did you ever have a spell or an attack when for no reason your heart suddenly began to race, you felt faint, or you couldn't catch your breath?

About how many attacks did you have in the past 12 months?

In what month and year did you have (the last one/this attack)?

Did (this attack/these attack ever) happen in a situation when you were not in danger or not the center of attention?

A moment ago, we discussed situations that cause unreasonably strong fears. When you have attacks of the sort you just described, do they usually occur in situations that cause you unreasonably strong fears?

Did you ever have an attack in the past 12 months when you were not in a situation that usually causes you to have unreasonably strong fear?

When you have attacks,...

a. Does your heart pound?
b. Do you have tightness, pain or discomfort
c. Do you sweat?
d. Do you tremble or shake?
e. D you have hot flashes or chills?
f. Do you, or things around you, seem unreal?

Adolescents Aged 12-17

Below is a list of items that describe young people. Think about whether each item describes you now or within the past 6 months. Please mark the box next to the "1" if the item is not true of you. Mark the box next to the "2" if the item is somewhat or sometimes true of you. If the item is very true or often true of you, mark the box next to the"3'. Please mark only one box for each question.

Note: This answer sheet contains a list of 112 questions about problems and experiences pertaining to youths. This scale was developed by Dr. Thomas Achenbach, and was used on the NHSDA with his permission. Due to copyright restrictions, the questions are not shown in this report.

HEALTH CARE ACCESS

Is there one particular person or place that (you usually go/SAMPLE MEMBER usually goes) to when (you are/SAMPLE MEMBER is) sick or needs(s) advice about (you/his/her) health?

HEALTH INSURANCE

Several government programs provide medical care or help pay medical bills. (HAND SHOWCARD 7). People covered by Medicaid have a card that looks like this. (PAUSE) In (MONTH), (were you/was (SAMPLE MEMBER))covered by Medicare? Medicare is a health insurance program for persons 65 and older and for certain disabled persons.

In (MONTH), were you/was (SAMPLE MEMBER)) covered by Medicaid or (Medical Assistance/CAL.-KAN.-AZ.)? Medicaid or (Medical Assistance/CAL.-KAN.-AZ. NAME) is a public assistance program that pays for medical care.

In (MONTH), (were you/was (SAMPLE MEMBER)) covered by Campus, CAMPUS, CHAMVA, the VA or military health care? These programs cover active duty and retired career military personnel and their dependents and survivors and also disabled veterans and their and survivors.

Health insurance can also be obtained through an employer or union or by paying premiums directly to a private health insurance company or to a health maintenance organization. (Were you/Was (SAMPLE MEMBER)) covered by private health insurance or by membership in a health maintenance organization (you/(s)he/someone in the family) purchased this way or by health insurance provided by an employer or union in(MONTH)?

Was this private health insurance plan offered through (your/SAMPLE MEMBER'S)) employer or union or through the employer or union of some other family member?

Was (your/SAMPLE MEMBER'S)) private health insurance coverage obtained by paying premiums directly to a private health insurance company or health maintenance organizations?

Did (your/SAMPLE MEMBER'S)) private health insurance plan or health maintenance organization include coverage treatment for any of the following conditions?

a. Alcohol abuse or alcoholism
b. Drug abuse?
c. Mental or emotional difficulties?

PREGNANCY

Are you currently pregnant?

How many months pregnant are you?

***CRIME* (1991-1993)**

Not counting minor traffic violations, have you ever been arrested and booked for breaking the law? *(Being "booked" means that you were taken into custody and processed by the police or by someone connected with the courts, even if you were then released.)*

Not counting minor traffic violations, how many times during the past 12 months have you been arrested and booked for breaking a law?

Not counting minor traffic violations, in the past 12 months, for what offenses listed below were you arrested and booked?

Larceny or theft
Burglary or breaking and entering
Aggravated assault
Other assault, such as simple assault or battery
Motor vehicle theft
Robbery
Forcible rape
Murder, homicide, or non-negligent manslaughter
Arson
Driving under the influence
Drunkenness or other liquor law violation
Possession or sale of drugs
Prostitution or commercialized sex
Other property offenses, such as fraud, possessing stolen goods, or vandalism
Other offenses (please describe)
Was not arrested and booked for any offense in the past 12 months

Were you on probation at any time in the past 12 months?

Were you on parole at any time in the past 12 months?

This section deals with activities that may be against the law. Read each item, then circle the 01 if you have done the activity in the past 12 months. If you did not do the activity in the past 12 months, circle the 02.

During the past 12 months, have you:

a. taken something from a store without paying for it?
b. other than from a store, taken money or property that did not belong to you?
c. purposely damaged or destroyed property that did not belong to you?
d. taken a car that didn't belong to someone in your family without the owner's permission?
e. used a weapon, force, or strong-arm methods to get money or things from a person?
f. broken in to a house or building to steal something or just to look around?
g. hit someone or gotten into a physical fight?
h. hurt someone badly enough to need bandages or a doctor?
I. used a knife or gun or some other thing (like a club) to get something from a person?
j. driven any kind of vehicle while you were under the influence of alcohol or illegal drugs?
k. sold any illegal drugs?
l. done anything else that would have gotten you into trouble with the police if they had known about it? (PLEASE DESCRIBE.)

Appendix C

Key Definitions

Key Definitions

DEMOGRAPHICS

Family type: This variable uses the household roster to classify the household of respondents ages 12-17 into one of two family types.

1) Two biological parent family: mother and father living in the household, and no stepmother or stepfather living in the household.

2) Other family type. This includes mother only family, father only family, non-biological family (i.e., stepmother only, or stepfather only, or stepmother and stepfather living in the household, but no mother or father living in the household), relatives (e.g., sibling, step sibling, grandparent, or other relative living in the household, but no mother, father, stepmother, stepfather, spouse, ex-spouse, or live-in partner), and other living arrangements, such as living with a spouse and live-in partner.

Race/ethnicity: "Race" and "Hispanic origin" are combined into five mutually exclusive categories: non-Hispanic whites, non-Hispanic blacks, Hispanics, Asian or Pacific Islander, and American Indian or Alaskan Native (because of very small sample sizes, the latter two categories are combined into "Other" in all tables except Tables 3.5-3.6).

School dropout: 12-17 year olds are defined as dropouts if they are not enrolled in school at the time of NHSDA interview and have not graduated from high school.

SUBSTANCE USE

Incidence of first alcohol use and incidence of first marijuana use:

1. Age-specific rates of first alcohol or marijuana use,
2. The annual number of alcohol or marijuana initiates,
3. The age-standardized annual number of alcohol or marijuana use initiates.

The age-specific incidence rates are closely related conceptually to the annual number of substance use initiates and to the age-standardized annual number of substance use initiates. Each incidence rate is computed by dividing an estimated number of substance use initiates by a corresponding "exposure to risk" measured in units of person-years. That is, the number of substance use initiates of a specified age during a specified historical period is simply the *numerator* of the age-specific incidence rate for the same age and historical period. For example, to compute the rate of alcohol incidence for persons age 10-14 during

1946-50, one divides the estimated number of persons who began using alcohol during 1946-50 when they were between 15 and 19 years of age by the corresponding "exposure to risk." Generally, if there were relatively *many* people who were between 10 and 14 years of age during 1946-50 and who *might* have begun using alcohol at that age and time, then the exposure to risk would be high. Conversely, if there were relatively *few* people who were between 10 and 14 years of age during 1946-50 and who *might* have begun using alcohol at that age and time, then the estimated exposure to risk would be low.[1] By summing the numerators of the age-specific incidence rates for a given historical period across all ages, and dividing by five, one obtains the average annual number of substance use initiates in the period.

Equivalently, the annual number of substance use initiates can be computed as the weighted sum of age-specific incidence rates, with each rate weighted by the number of person-years of exposure to risk in the corresponding age group. Let RATE (a, t) denote the rate of incidence for the a-th age group in period t and let DEN (a, t) denote the denominator (person-years of exposure to risk) of this rate. Then the total number of initiates in period t equals

$$Initiates(t) = \frac{\sum_{a} RATE(a,t)\ DEN(a,t)}{5}$$

The same formula can be adapted to compute the *age-standardized* annual number of initiates in period t. The age-standardized annual number of initiates answers the question: How many initiates per annum would there have been in period t if the size and distribution of population by age had remained the same as in some previous (or subsequent) period, say t_0? To compute the age-standardized annual number of initiates in period t, assuming that the size and age distribution remained the same as in period t_0, one uses the same formula with DEN (a, t_0) substituted for DEN (a, t) for each age group a.

---

[4] The calculation of exposure to risk (denoted "DEN" for denominator) for historical periods and age groups in Tables 1-6 (see Appendix C) was a little complicated because individuals who are at a specified age sometime during a specified period do not comprise a birth cohort. For example, individuals aged 10-14 at some time during 1971-75 could have been born in any year between 1957 (i.e., 1971 - 14) and 1965 (i.e., 1975 - 10). An individual's number of person-years of exposure to risk in the age group 10-14 during 1971-75 depends upon the individual's calendar year of birth as well as upon the individual's year of first use. If the individual did not use the drug prior to 1976, the individual's number of person-years of exposure at age 10-14 during 1971-75 equals approximately .5 years if the individual was born in 1957 or 1965, 1.5 years if the individual was born in 1958 or 1964, 2.5 years if the individual was born in 1959 or 1963, 3.5 years if the individual was born in 1960 or 1962, and 4.5 years if the individual was born in 1961. If the individual was not born between 1957 and 1965 or if the individual used marijuana prior to 1971, his or her number of person-years of exposure at age 10-14 during 1971-75 equals 0. If the individual first used marijuana between 1971 and 1975 while aged 10-14, the individual's number of years of exposure equals the calendar year of first use minus the maximum of (calendar year age 10 was attained, 1971). The denominators of the rates presented in Tables 1-6 in Appendix C were computed as the weighted sums of the estimated exposure times of individuals, with each individual weighted using their appropriate sampling weight.

Binge alcohol use: Drinking five or more alcoholic drinks on the same occasion at least once in the past 30 days.

Heavy alcohol use: Drinking 5 or more drinks per occasion on 5 or more days in the previous 30 days.

Heavy cigarette use: Smoking one pack or more each day in the past 30 days.

Drug dependence 1991-1993: (See Appendix B for question wording)

In **1991-1993** a person was defined as dependent if they met 3 or more of the following 5 DSM-III-R criteria:

1. Tried and failed in an attempt to cut down on use
2. Needed a larger amount to get the same effects or to get high
3. Using daily or almost daily for at least two weeks in a row
4. Had withdrawal symptoms
5. Felt they needed or were dependent on the drug

Drug dependence 1994: (See Appendix B for question wording)

In **1994** a person was defined as dependent based on the DSM-IV if they had 3 or more of the following 5 DSM-IV criteria:

1. Built up a tolerance for the drug
3. Used the drug more often than intended
4. Wanted to cut down
   Unable to cut down
   Wanted to cut down and unable to cut down (1994)
5. Spent month or more in past year using or getting over the drug
7. Drug caused problems (1994)

Drug dependence 1995: (See Appendix B for question wording)

In **1995** a person was defined as dependent based on the DSM-IV if they met 3 or more of the following 6 DSM-IV criteria:

1. Built up a tolerance for the drug
3. Used the drug more often than intended
4. Wanted to cut down or tried, but found couldn't
5. Spent month or more in past year using or getting over the drug
6. Drug reduced important activities (1995 only)
7. Drug caused problems (1994)
   Emotional problems
   Health problems
   Emotional problems or health problems

Problem drug use 1991-1993, 1994-1995 for Chapters 3, 4, and 8 : "Problem drug users" are defined as such if they had any of the following in the previous 12 months: dependence on any illicit drug, used injection drugs, received treatment for drug use, heavy or frequent use (daily or more use of marijuana, used heroin in the last year, or weekly or more use of psychotherapeutics, hallucinogens, inhalants, or cocaine).

Problem drug use 1991-1993, 1994-1995 for Chapters 6 and 7: "Problem drug users" are defined as such if they had any of the following in the previous 12 months: dependence on any illicit drug, used injection drugs, received treatment for drug use, heavy or frequent use (*daily or almost daily* use of marijuana, used heroin in the last year, or weekly or more use of psychotherapeutics, hallucinogens, inhalants, or cocaine). "Problem drug use" in Chapters 6 and 7 is the same as "need for drug treatment".

MENTAL HEALTH

ADULTS

The mental health module was developed by the Institute for Social Research at the University of Michigan as a mental health screening scale. This scale was used in the National Comorbidity Survey conducted by Ronald A. Kessler and colleagues (1994) based on previously developed standards in psychiatric epidemiological research. This module was used to estimate the presence during the past year of four clinical mental syndromes defined in DSM-III-R, the Diagnostic and Statistical Manual (Revised Third Edition). The syndromes are defined as follows:

Major Depressive Episode. The essential feature of a Major Depressive Episode is either depressed mood . . . or loss of interest or pleasure in all, or almost all, activities . . . for most of the day, nearly every day, during at least a two-week period (p. 218).

Generalized Anxiety Disorder. The essential feature of this syndrome is . . . unrealistic or excessive anxiety and worry (apprehensive expectation) about two or more life circumstances, e.g., worry about possible misfortune to one's child (who is in no danger) and worry about finances (for no good reason), for six months or longer, during which the person has been bothered by these concerns more days than not (p. 251).

Agoraphobia. The essential feature of this syndrome is . . . the fear of being in places or situations from which escape might be difficult (or embarrassing) or in which help might not be available in the event of suddenly developing a symptom(s) that could be incapacitating or extremely embarrassing (p. 240).

Panic Attack. This involves discrete periods of intense fear or discomfort, with at least four associated symptoms. . . panic attacks usually last minutes or, more rarely, hours. The attacks, at least initially, are unexpected, i.e., they do not occur immediately before or on exposure to a situation that almost always causes anxiety. . . The symptoms experienced during an attack are: shortness of breath (dyspnea) or smothering sensations; dizziness, unsteady feelings, or faintness; choking; palpitations or accelerated heart rate; trembling or shaking; sweating; nausea or abdominal distress; depersonalization or derealization; numbness or tingling sensations (paresthesias); flushes (hot flashes) or chills; chest pains or discomfort; fear of dying; and fear of going crazy or doing something uncontrollable during the attack (pp. 235-236).

ADOLESCENTS:

Emotional Problems is Achenbach's internalizing score (Achenbach, 1991), which sums up the scores on three syndrome scales: withdrawn, somatic complaints and anxious/depressed:

Withdrawn: Rather be alone, won't talk, secretive, shy, underactive, sad, withdrawn

Somatic complaints: Dizzy, tired, aches, headaches, nausea, eye problems, skin problems, stomach problems, vomiting.

Anxious/depressed: Lonely, cries, harms self, fears might think/do something bad, perfect , unloved, others out to get them, worthless, nervous, fearful, guilty, self-conscious, suspicious, talks suicide, sad, worried.

Behavioral problems is Achenbach's externalizing score, which sums up the scores on two syndrome scales: delinquent behavior, and aggressive behavior.

> **Delinquent behavior:** No guilt, hangs w/ kids who get in trouble, lies/cheats, prefers to be with older kids, runs away, sets fires, steals from home, steals from outside, swears , truant, use alc/drugs.
>
> **Aggressive behavior:** Argues, brags, mean, demands attention, destroys property, destroys others property, disobeys school, jealous, fights, attacks, screams , show-off, stubborn, mood change, talks too much, teases, temper , threaten others, loud

PARENTING AND CHILDREN

Number of children under age 18 living with the respondent: Number of biological children of a particular age living in the household.

Problem drug-using parents: Individuals defined as "problem drug users" (see Problem drug use above) who lived with biological children under age 18 in the same household.

CRIME

Self-Reported arrested and booked: In the NHSDA, respondents were asked if they had been arrested and booked in the last 12 months for larceny or theft, burglary or breaking and entering, aggravated assault, other assault, motor vehicle theft, robbery, forcible rape, murder, homicide, or manslaughter, arson, driving under the influence, drunkenness or other liquor law violations, possession or sale of drugs, prostitution, other property offenses, and any other offense not mentioned. These were combined to look at "any offense."

Arrest for violent offenses: Violent arrests include aggravated assault, other assault, robbery, forcible rape, and murder, homicide or manslaughter.

Arrest for property offenses: Property arrests include larceny or theft, burglary or breaking and entering, and motor vehicle theft.

Self-Reported criminal activities: Respondents were asked a series of questions about "activities that may be against the law" that they had done in the past 12 months. Committing "any criminal activities" combines taking something from a store without paying for it, otherwise taking money or property that was not yours, purposely damaging or destroying others' property, car theft, using some kind of a weapon, force, or strong-arm methods to get something from a person, breaking into a house or building to steal or

just look around, hitting someone or getting into a physical fight, hurting someone badly, driving under the influence of alcohol or drugs, and selling illegal drugs.

Violent offenses: Violent offenses combines using a weapon or force to get something from a person, hitting/getting into a fight, and seriously injuring someone.

Property offenses: Property offenses combines stealing, car theft, and breaking into a house or building.

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